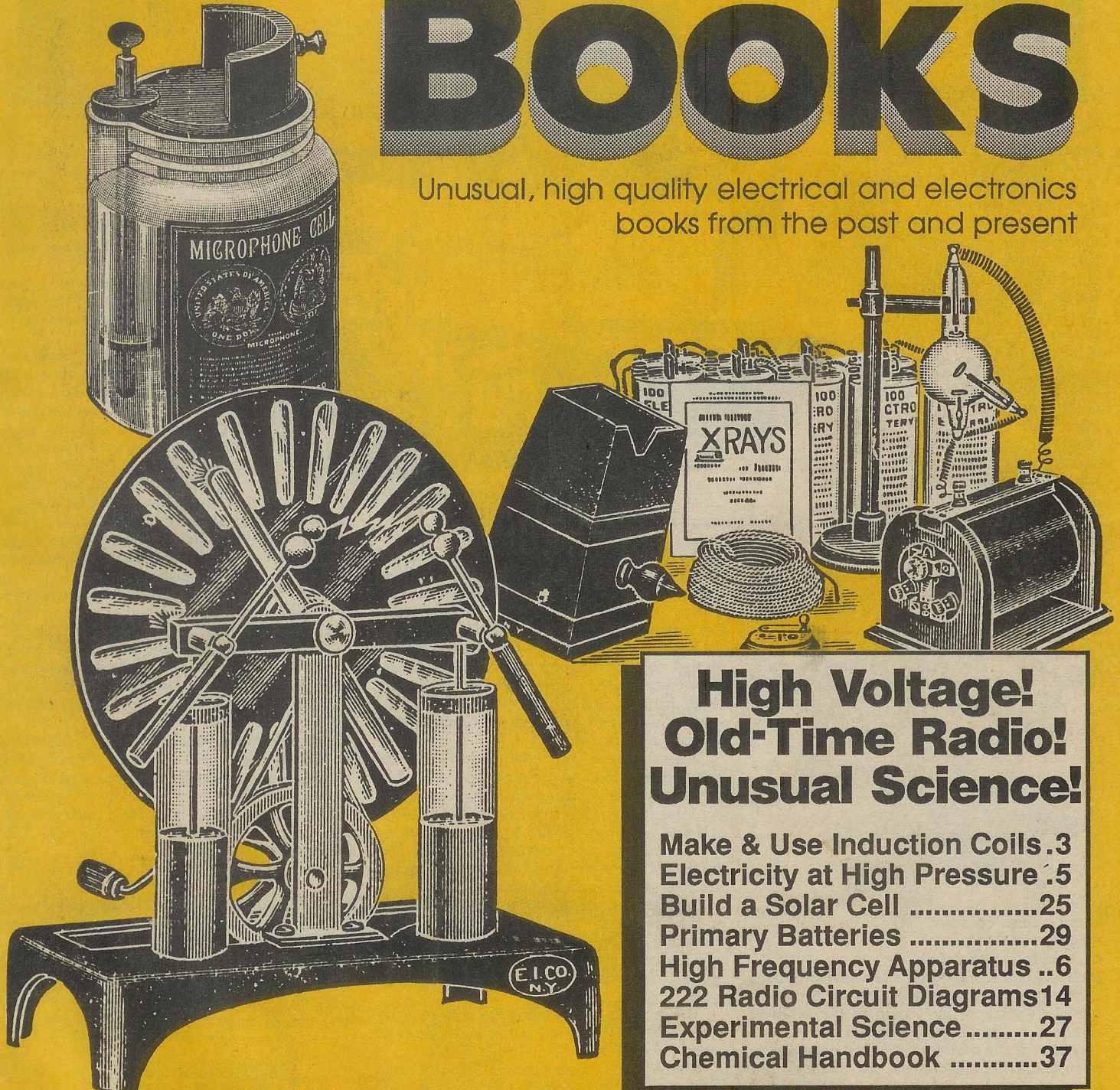


# Lindsay's Electrical Books

Unusual, high quality electrical and electronics  
books from the past and present



## High Voltage! Old-Time Radio! Unusual Science!

Make & Use Induction Coils .3  
Electricity at High Pressure .5  
Build a Solar Cell .....25  
Primary Batteries .....29  
High Frequency Apparatus ..6  
222 Radio Circuit Diagrams 14  
Experimental Science .....27  
Chemical Handbook .....37

## Lindsay Publications Inc

PO Box 583, Manteno IL 60950 • 815/468-3668 • FAX 815/468-3694



# Design & Construction of INDUCTION COILS

## The Design & Construction of INDUCTION COILS

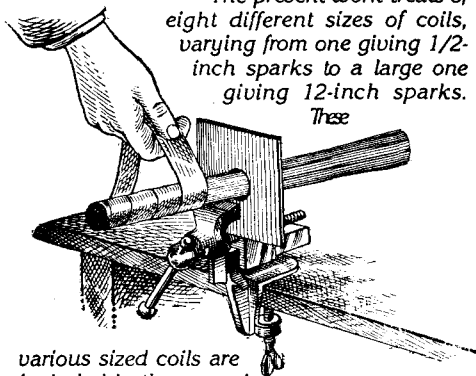
by A. Frederick Collins

Inside the cover of this 1908 classic is the author's statement: "For over fifty years the induction coil has held a preeminent place in the experimental laboratory for the production of high potential [high voltage] currents, but it did not become a commercial piece of apparatus until Roentgen announced his discovery of the X-rays in 1890.

Since these rays were most easily and effectively set up by the energy of the induction coil, there was an immediate and widespread demand for apparatus of this type capable of producing long disruptive discharges, and a further impetus was given the industry thus established when Marconi devised his wireless telegraph in 1896...

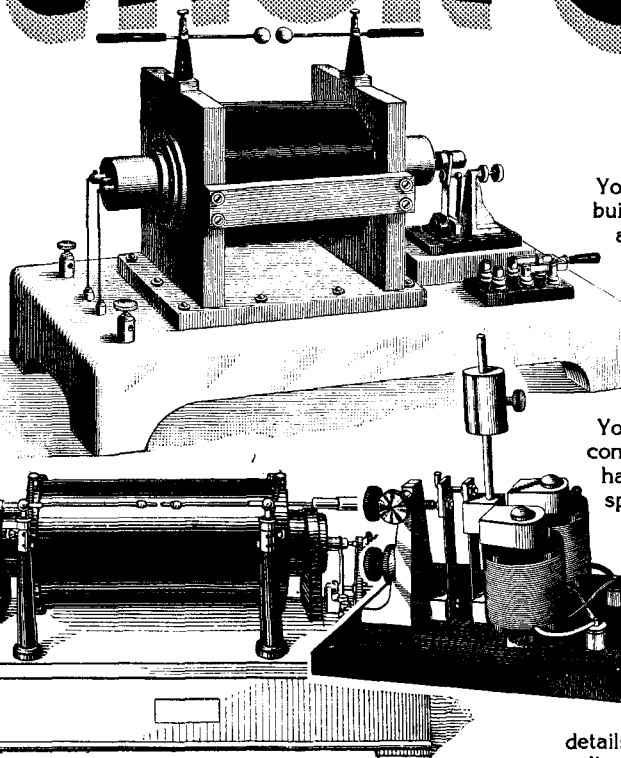
The art of coil making has been developed to a remarkable degree, [but] the actual processes of construction... have not been hitherto available....

The present work treats of eight different sizes of coils, varying from one giving 1/2-inch sparks to a large one giving 12-inch sparks. These



various sized coils are included in three specific designs, and I have tried to tell in easily comprehensible language each process in sequence, together with the dimensions of each part down to the smallest screw....

Much of the matter in this book has never been published before, as, for instance the vacuum drying and impregnating processes, the making of adjustable mica condensers, the construction of interlocking reversing switches, the set of complete wiring diagrams, etc...."



You'll learn how to dip the coil and bake it, build a vacuum apparatus to impregnate the apparatus, to dry the insulation, and more.

A whole chapter covers the kinds of spring interrupters, machining the parts for a simple spring interrupter, assembling the parts, mounting the finished device, and more.

You'll learn about making tinfoil and paper condensers, adjustable mica condensers, hard rubber bed blocks, compressional spiral springs, and more.

Three additional chapters cover the reversing switch, its construction and operation, choosing and using the correct spark gap, and the construction and finishing of a hardwood base, even to the extent of applying French Polishing.

And on it goes! You get wiring diagrams for various coils, final assembly details, sources of direct current including dry cells, plunge batteries, chloride accumulators, motor-generator units, electrolytic interrupters to convert AC to DC and more.

The final chapters concern themselves with materials and their procurement, along with useful tables, formulas, symbols and data.

This is a really a great book. You get more useful data in one place on building coils than you'll usually find in a dozen other books. And 160 illustrations will show you exactly how to build that hot performing coil.

Sure Tesla coils are fun and fascinating. But so is the induction coil. Build one. Experiment. Have fun. Show your friends. Hook it up to your garbage cans to keep the cats and dogs away (kids and mothers-in-laws, too). Get a copy of this. Highly recommended. 5 1/2 x 8 1/2 paperback 272 pages  
Cat. no. 20404

\$12.95

## SPECIAL HARDCOVER EDITION

A fraction of the print run has been cloth bound for collectors and libraries. This may edition may from time-to-time be out of stock for long periods of time.

Cat. no. 20447

\$19.95

An auto ignition coil is an induction coil, that is, an iron-core high-frequency high-voltage transformer driven from a direct-current source. And here you get one of the best books I've ever seen on their construction.

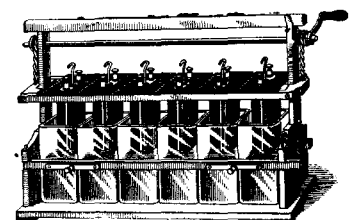
The first chapter starts out with the history of the coil, describing the contributions of Schweigger, Davy, Faraday, Lenz, Callan, Neef, Frizeau, Ruhmkorff (who built a 16" spark coil), Tesla (and his mercury turbine interrupter), and others.

The other nineteen chapters delve into the theory of the coil and the action of each of its components, design of spark coil cores, choosing interrupters, details of condenser design and size, and more. Wire is discussed along with its cutting, straightening, annealing, the making of the paper tube, bundling and taping wires for large cores, and more.

Detailed discussions reveal the advantages of silk versus cotton-covered magnet wire, mounting the spool in the lathe, winding the primary, making a winding jig, winding the primary by hand, insulating the primary and more.

The problem of insulating the primary from the secondary is solved either with paper or rubber, and each is discussed in detail.

Chapters 7 & 8 cover in detail the intricacies of winding the high-voltage secondary including details of a special winding machine, the impregnation of insulation waxes, the winding of helical secondaries, construction of aperture insulating rings, and more.



# Build a High-Voltage WIMSHURST MACHINE

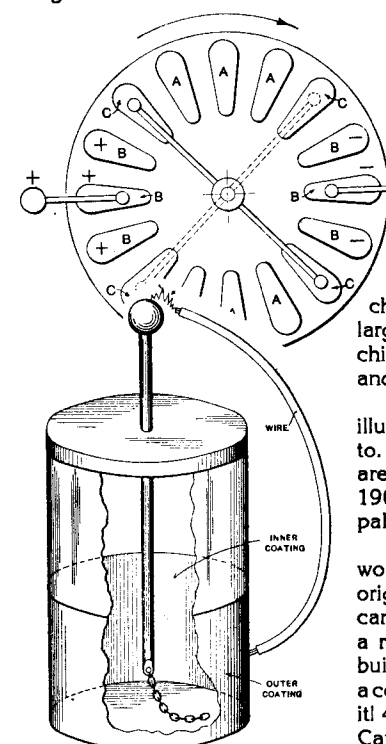
## THE WIMSHURST MACHINE

How to Make and Use It  
by Alfred W Marshall  
reprinted by  
Lindsay Publications

"A practical handbook on the construction and working of the Wimshurst machine, including radiography and wireless telegraphy, etc., and other static electrical apparatus."

Build yourself a copy of this classic lightning bolt generator. This is no toy! Its 24" plates will knock your socks off — and probably electrocute you if used with Leyden jar accumulators. This is a heavy duty machine.

Chapters include introduction, static electricity, the electrophorus, the electroscopes, condensers, the Leyden jar, parts of a Wimshurst machine, making and management of Wimshurst machine, examples of machines, a large Wimshurst machine, a machine for X-Ray work (dangerous), and experiments with machines.



chine, examples of machines, a large Wimshurst machine, a machine for X-Ray work (dangerous), and experiments with machines.

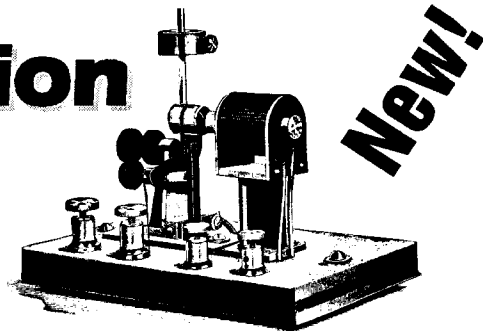
This is a small book loaded with illustrations and wall-to-wall how-to. There are photographs but they are of poor quality. After all, in 1908 not every printer was capable of printing photographs.

This is quite a rare book. You would be hard pressed to find an original copy at any price. But you can have a copy for your library at a reasonable price and use it to build a machine or just to read. Get a copy. Great little book. You'll like it! 4x7 paperback 112 pages

Cat. no. 20331 \$7.95

# Induction Coils!

## How to Make, Use and Repair Them...



## INDUCTION COILS

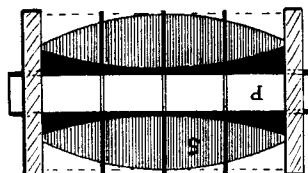
How to Make, Use,  
and Repair Them

by H. S. Norrie

reprinted by

Lindsay Publications Inc

Although this classic work first appeared in 1896, this fourth edition was printed in 1907. And it's just that — a classic. It's not the best book on induction coil construction, or batteries, or wireless telegraphy, or X-Ray or any other high voltage experimentation, because



each chapter could be a book in itself. But it is a classic that anyone interested in lightning bolt generators tries to get his hands on. And although Norrie's book covers much the same information as others, you get a different slant, a different point of view that you will find useful.

Chapters include Coil Construction, Contact Breakers, Insulations and Cements, Condensers, Experiments, Spectrum Analysis, Currents in Vacuo, Rotating Effects, Gas Lighting, Batteries for Coils, Storage or Secondary Cell, Tesla and Hertz Effects, the "Roentgen" Rays and Radiography, and Wireless Telegraphy.

You get information, some of it quite unique, on Ruhmkorff coils, oil immersed coils, a disruptive Tesla coil, medical coil with interchangeable secondaries, mercury vibrators, Wehnelt interrupter, adjustable cone vibrator, insulating compounds, Leyden Jar construction, glass plate condensers,

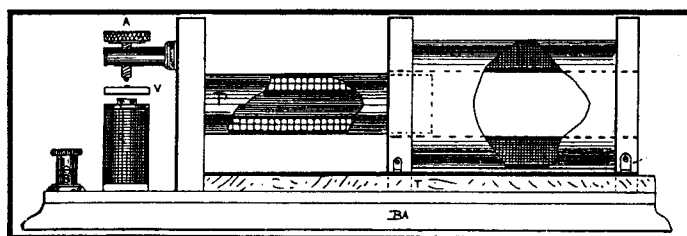
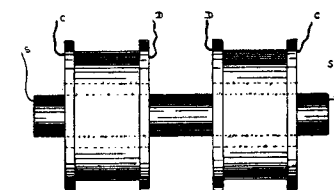
adjustable condensers, experiments with luminous effects, use of the spectroscope with coils, different forms of mercury air pumps, Geissler tubes, effects of discharges in rotating tubes, application of the Ruhmkorff coil for lighting gas, and more.

You'll learn how to build batteries: Grenet, Fuller, Gravity, Dun, Gethis, Gordon, New Standard, and others. Learn how to build and use secondary, or storage batteries. Investigate the "Tesla" effects, the use of high frequency currents in electro-therapy, ways of generating X-Rays (very dangerous), the construction of a very early wireless set using a coherer detector, and much more.

You'll find many illustrations. They aren't all that spectacular but you do get 79 drawings, and 8 tables.

This is a book that should be in every high voltage experimenter's library. It IS a classic. If it has any fault, it's that the author has tried to cover too much material in too small a book. Nevertheless, there is much here that you can use. The reprint will cost you less than the cost of an original if you can find one. Get a copy. You'll like it. 4 1/2 x 6 paperback 288 pages

Cat. no. 20510 \$9.95



# STATIC ELECTRICITY!

*Unusual High Voltage Equipment!  
Dozens of Unusual Experiments!*

## STATIC ELECTRICITY

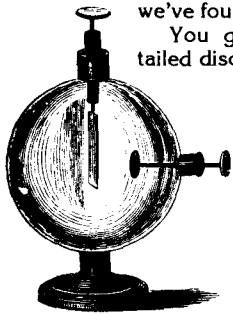
by J. H. Pepper  
reprinted by  
Lindsay Publications

Static electricity is a nuisance when you walk across a carpet and then watch a blue flame jump out from a doorknob to burn off the end of your finger. But this kind of electricity can also be fascinating.

Back in the 1880's when people knew little about current electricity, static or frictional electricity was a scientific curiosity in laboratories and parlours. Giant lightning generators were built by amateurs and educators and bizarre experiments performed.

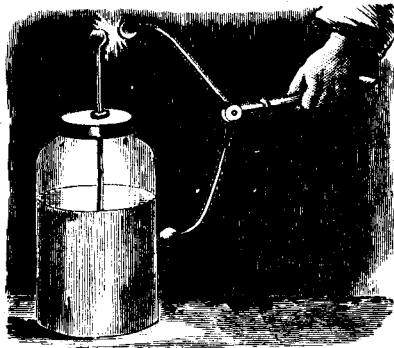
From Pepper's "Cyclopaedic Science Simplified" we've reprinted the chapter entitled "Electricity, Frictional or Statical", one of the best textbook discussions we've found yet.

You get a detailed discussion of



electroscopes, 17 electroscope experiments, Cavallo's Cylinder Electrical Machine, the Royal Polytechnic Great Plate machine, Winter's electrical machine, the Holtz machine, the Electric Well experiment, experiments in induction, charge storage techniques, lengthy discussion of Leyden jars, the Leyden battery, followed by another thirty experiments including Cuthbertson's Balance Electrometer, the electric bomb, Harris's thundercloud needle, and a couple of machines for generating high voltage with a steam jet! And there is much more.

Everyone seems to be building electronic devices with in-

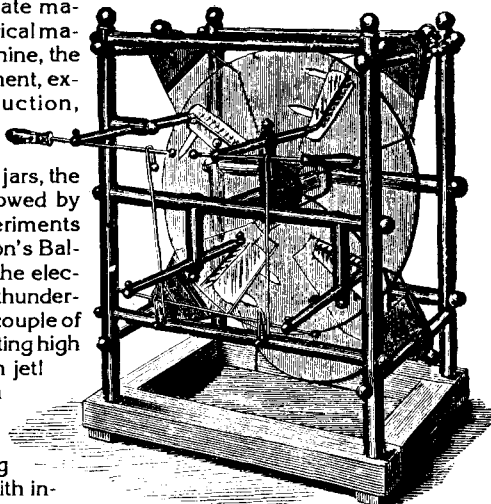


tegrated circuits. No one seems to know about old time electricity. Here, in one volume are forgotten electrical devices, principles, and experiments. You'll find page after page of unusual information and illustrations.

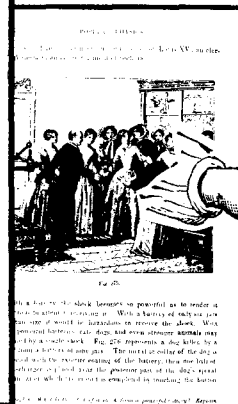
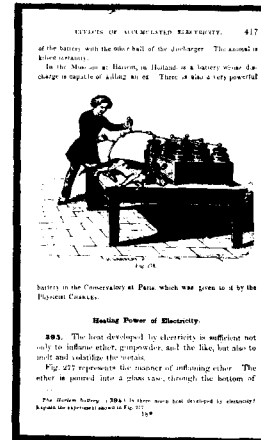
There are a lot of old science textbooks available in old bookstores for little money. But a really a good discussion of static electricity like this one is hard to find.

Although this is not really a cookbook for building equipment, the wood engravings are quite detailed, and the text describes the equipment thoroughly enough that you could probably build the devices without great trouble. This is a great source for unusual science fair projects.

If you like to explore old scientific principles, build unusual apparatus, or just impress your friends, consider a copy of this unusual book. I think you'll like it. 5 1/2 x 8 1/2 paperback 88 pages Cat. no. 4783 \$5.95



# Peck's Electrical Recreations

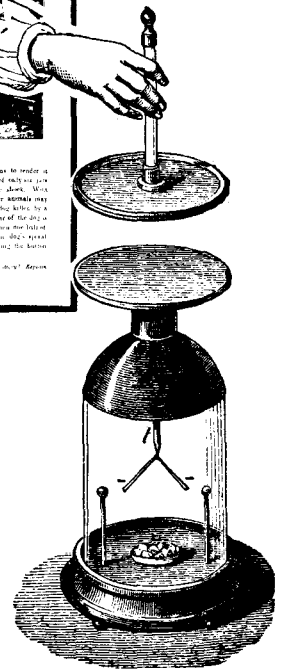


## William Peck's ELECTRICAL RECREATIONS reprinted by Lindsay Publications

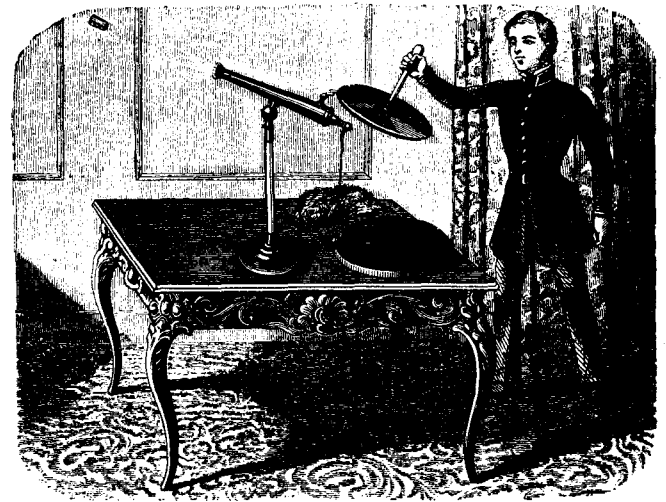
Go back to 1860 and discover static electricity experiments designed to inform and entertain students studying physics in schools and academies.

If you've collected other early static electricity works, you'll find some of this to be old hat. But other parts will be new and quite interesting.

Learn about the electrical chime, an electrified puppet, the electrical wheel, the electrical egg, the electrical square, the electrical cannon, the condenser of Epinus, using the condenser, slow and fast discharge of the condenser, the Leyden jar, a battery of Leyden jars, the condensing electrometer, electrocution of dogs!, heating power of electricity, and the mechanical effects of electricity.



You'll find fascinating old time wood cuts illustrating almost every article. If static electricity is your field, you'll want to add this low-cost booklet to your reference library. Very interesting and very unusual. Get a copy. 5 1/2 x 8 1/2 booklet 24 pages Cat. no. 839 \$3.25



# How to Build a 40,000 Volt Induction Coil

How to Build a  
40,000 VOLT INDUCTION COIL  
by Walt Noon

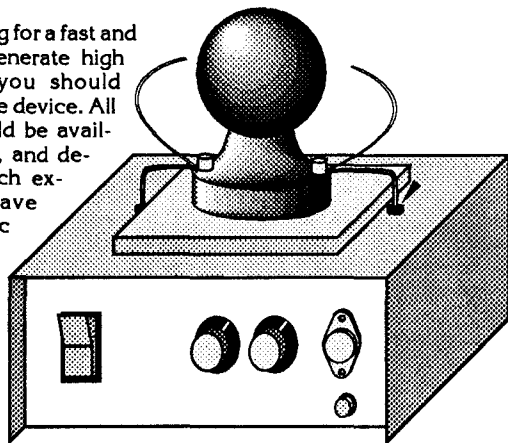
Are you looking for a fast and simple way to generate high voltage? Then you should build this nifty little device. All of the parts should be available in your area, and depending how much experience you have building electronic equipment, you should be able to bolt it together in a few hours.

As you already know, the ignition coil in your automobile is the modern equivalent of an old time induction coil. It is nothing more than a transformer that converts low voltage into very high voltage. The points in your automobile replace the old fashioned spark gap. Every time the points open, a pulse of DC current hits the coil like a hammer hits a bell. The ignition coil "rings" like a bell and produces a burst of high voltage. If you "hit" the coil fast enough, the ringing seems to be continuous.

Walt Noon's circuit here replaces the spark gap and the points with a low cost solid state circuit. The circuit takes 110 VAC out of your wall and converts it into a string of DC pulses. The pulses are sent to the terminals of an ignition coil that you can purchase at your local discount store. Off the high voltage terminal comes a solid 40,000 volts that can be used for a variety of experiments including plasma globes and Kirlian photography.

The circuit, based on a 555 timer integrated circuit, provides pulses with adjustable power and frequency. This allows you to easily tune the pulses to the natural resonant frequency of the coil which will significantly increase the output voltage.

You get drawings of the unit, parts list, circuit diagram, photos and assembly instructions for the coil. You are expected to have at least some experience building modern electronic



equipment with perf board. You get hints, tips and suggestions on where and how to make circuit modifications.

Probably best of all, Walt includes eight different experiments plus extensive details on Kirlian photography. He'll show you how to modify an inexpensive 35mm camera to take these unusual photographs in color and black and white. You also get six Kirlian photographs taken with the equipment he shows you how to build.

If you want to try your hand at high voltage experiments, this might be just the way for you to "cut your teeth", and it's something you'll be proud to show your friends. And it's a good way to literally shock the pants off them! Get a copy of this. It's unusual. It's well written. And it's inexpensive. You'll like it. 5 1/2 x 8 1/2 booklet 24 pages

Cat. no. 844

\$4.95



# Electricity at High Pressures and Frequencies

ELECTRICITY AT  
HIGH PRESSURES  
AND FREQUENCIES

by Henry L. Transtrom

reprinted by Lindsay Publications

This off beat book on high voltage appeared in 1913 and was revised again for publication in 1921. It has no table of contents because, I guess, the chapters have no names. It does have a list of illustrations indexed in the beginning of the book in alphabetical order! There appear to be 139 illustrations.

The entire first part of the book

covers electrical theory on electricity, how it is produced by generators, ideas of induction, ampere-turns, frequency and the phase shift that occurs through reactive elements and much more. This isn't heavy stuff — practical theory that builders can use. You'll find the explanations are translations of "heavy" theory in electrical engineering texts. This is great material for the experimenter in induction coils, Tesla coils, Oudin coils, and other lightning bolt generators.

You won't find much how-to, but you will find details about existing equipment, how it works, simple calculations on performance, and some remarkable photographs of experiments that can be performed with a lightning bolt generator.

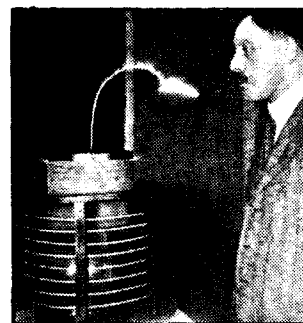
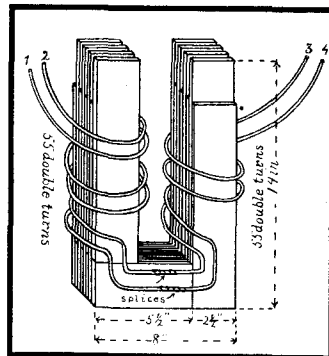
Chapter 13 on page 165 talks about the fact that Tesla, Fessenden and others have not been able to generate frequencies over 100,000 Hertz (cycles per second). Then they show you a Fessenden alternator driven by a 10 hp DC motor through gears that revolves at 20,000 rpm that kicks out over 2,000 watts of high-frequency high voltage!

You'll then read about capacitive machines. You'll see a device that develops 15,000 volts between two ends of 25 feet of No. 4 aluminum wire! Another photo shows a 10 volt 5 watt Mazda lamp is lit to full brightness although apparently short circuited by 6 inches of No. 00 copper wire! It shouldn't work, but it does. You'll see a high-frequency transformer that throws heavy 60" sparks between its terminals. Other photos show unusual high voltage experiments. The last 20% of this book is worth the price of the entire book!

This is another must have for the high-voltage library — a book that is very difficult to find in used book stores and so on. But now everyone can afford to have a copy. Get a copy. You'll like it. Excellent book! 5x7 paperback 264 pages

Cat. no. 20544

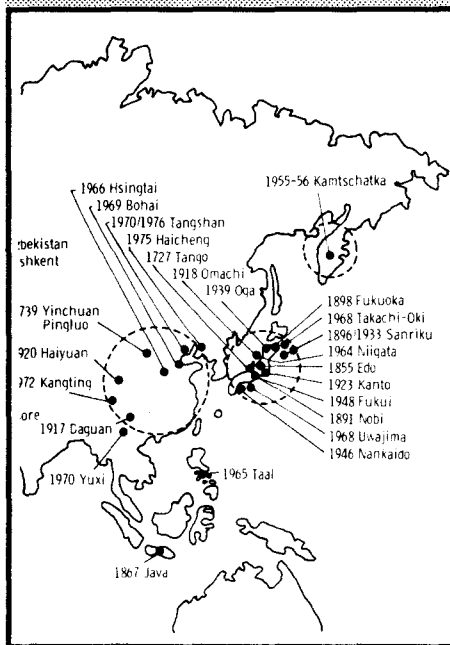
\$11.95



**New!**



# WHEN SNAKES AWAKE!



## WHEN THE SNAKES AWAKE Animals & Earthquake Prediction by Helmut Tributsch

From the back cover: "Two days before an earthquake struck Helice, Greece, in 373 BC, snakes, weasels, and worms deserted the city. Minutes before the Naples quake of 1805, oxen, sheep, dogs, and geese cried out in unison. A herd of horses tore loose and ran off in panic just prior to the San Francisco earthquake of 1906.

Helmut Tributsch, Professor of Physical Chemistry at the Free University of Berlin, visited his native village of Friuli shortly after it had been devastated by an earthquake in 1976. He was intrigued by the stories told by his old friends about their animals' strange behavior in the hours before the quake. This experience started Tributsch on a search through ancient and modern literature for stories relating animal behavior and the appearance of such phenomena as luminosity, clouded springs, and strange fogs to the onset of earthquakes. This book summarizes his findings and presents a plausible explanation for them. Tributsch urges Western scientists to follow the lead of their Chinese colleagues and learn to use these signs as a possible key to the prediction of natural disasters."

This is really an interesting book published by MIT covering 78 earthquakes from 373 BC to 1979 and the unusual phenomena that accompanied them. Not only is it interesting reading, but researches into the fringes of science will find the tables in the appendices quite useful.

Unusual. Reliable. I think you'll like it. 6x9 paperback 248 pages  
Cat. no. 752 \$9.95

# HIGH FREQUENCY APPARATUS

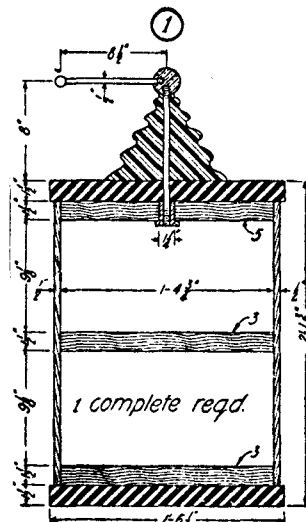
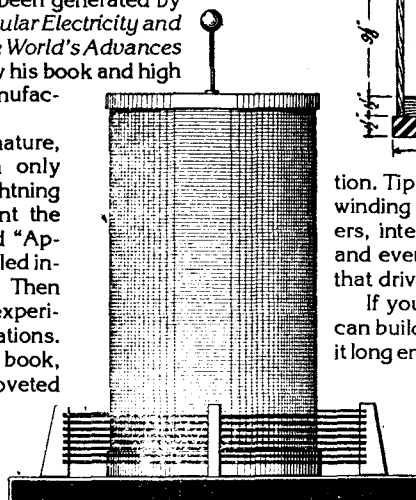
*Classic High Voltage  
Text is Back  
in Print!*

High Frequency Apparatus  
by Thomas Stanley Curtis  
reprinted by Lindsay Publications

By 1916 so much interest in induction, Tesla and Oudin coils had been generated by *Electrician & Mechanic*, *Popular Electricity* and *Modern Mechanics*, and *The World's Advances* magazines, that Curtis knew his book and high voltage equipment he manufactured would be a hit.

Because of their very nature, magazines could publish only brief articles on these lightning bolt generators. Curtis went the other extreme, and packed "Apparatus" with as much detailed information as he could find. Then he added suggestions for experiments and dozens of illustrations. The result is now a classic book, and original copies are so coveted that they're difficult to find.

You get wall-to-wall  
how-to on coil construc-



tion. Tips on calculating windings, winding coils, making transformers, interrupters and spark gaps, and even the power transformers that drive the spark gap.

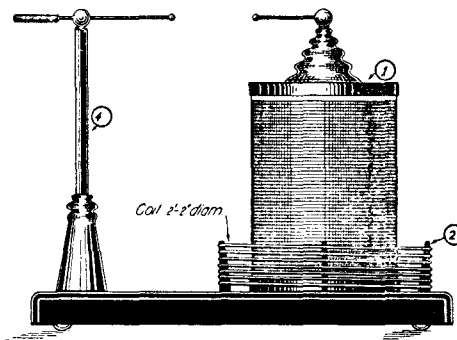
If you want to die young, you can build an X-ray apparatus. (Use it long enough, and you and every-

one in your apartment building will glow in the dark!

Build a grid and see for yourself if high frequency current really

does affect plant growth. Build yourself a large coil that produces 50" lightning bolts, give lectures, and make people think you are a genuine made scientist. (Bring your mother-in-law along. They might mistake her for Frankenstein....)

Great book. And absolutely **MUST HAVE** book for the Tesla coil experimenters. Get a copy for your high-voltage library. Quality. Order a copy today. 5 1/2 x 8 1/2 paper 247 pages well illustrated  
Cat. no. 20030 \$11.95

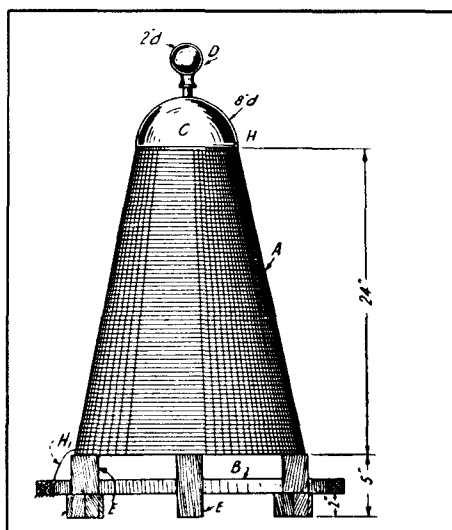


## Special Hardcover Edition

A fraction of the print run has been hard-bound with quality materials for the serious student and collector. This edition may be unavailable for long periods of time.  
Cat. no. 20048 \$18.95

## Contents

- 1 Alternating Current at Low and High Frequencies
- 2 How the High Frequency Current is Produced
- 3 The High Potential Transformer or Induction Coil
- 4 The Oscillation Transformer
- 5 The Spark Gap
- 6 Oscillation Transformers
- 7 Induction Coil Outfits Operated on Battery Current
- 8 Kicking Coil Apparatus
- 9 One-Half Killowatt Transformer Outfit
- 10 Quenced Gap Apparatus
- 11 Physicians' Portable Apparatus
- 12 Physicians' Office Equipment
- 13 Hot Wire Meter Construction
- 14 Notes for the Beginner in Electro-Therapeutics
- 15 Plant Culture with High Tension Current
- 16 High Frequency Plant Culture
- 17 A Foreword on the Construction of Electrical Apparatus for the Stage
- 18 Construction of Large High Frequency Apparatus
- 19 Large Tesla and Oudin Coils for the Stage
- 20 Construction of a Welding Transformer
- 21 Hints for the Electrical Entertainer
- Appendix Parts and Materials - How Much They Cost and Where to Get Them



## CONTENTS

Collin's Radiophone Arc  
Detector, Spark Gap, Hints & Tips  
Wrinkles, Recipes, Formulas  
Water Wheel Drives for Private Lighting Plants  
Construction & Use of the Gold-Leaf Electro-  
scope  
Marvels of Modern Physics (Electricity & Medi-  
cine)  
Vacuum Detector & How It Works  
A Small Static Machine  
Making Selenium Cells  
Giant 48" Spark Coil  
Rotary Spark Gaps  
High Frequency Alternator for Testing Crystal  
Detectors  
Chromic Acid Battery  
Construction of Wheatstone Bridge  
Lightning Made to Order  
How & Why of Radio Apparatus - Induction Coil  
High Frequency Resonator for Spark Coils,  
Making Chlorine  
Transmitting Your Photo Over a Wire  
Armstrong Regenerative Audio System  
An Adjustable Fixed Condenser, Electric Ther-  
mometer  
Reginald A Fessenden  
Radio Detector Development  
Gas Batteries  
The Measurement of Capacity  
Dr. Nikola Tesla & His Achievements  
How & Why of Radio Apparatus - Condensers  
Construction of a 6-Volt, 25 AH Storage Battery  
Bottle Tesla Coil, Experimental Arc, Hints &  
Tips  
Electricity & Life  
The Quenched Spark Gap  
Build a 500 Watt DC Dynamo  
Double Capacity Rotary Variable Condenser  
Construction of High-Frequency Apparatus for  
Medical & Lecture Use  
Use of High-Frequency Currents in Medical  
Work  
How & Why of Radio Apparatus - Spark Gaps  
High Frequency Apparatus and Experiments  
36" Spark Tesla Coil for Lecturers  
Amateur and Experimental Radio Research  
Tesla's Views on Electricity & War  
Suggestions for Radio Research Work  
Converting a Tuning Coil into a Cabinet Tuner  
A Hand-Feed Arc for the Experimenter  
X-Ray Tubes for High Frequency Coils  
Selenium Cell Design & Construction  
Home-Made Arc Search Light  
A Simplified Variable Condenser  
Constructing a 1/4 KW High Frequency Oudin  
Coil  
Construction of a Laboratory Vacuum Pump  
Regarding Tesla & Oudin Coils  
How I Telegraph Pictures  
How to Use High Frequency Currents in the  
Treatment of Disease

# The Very Best from the Electrical Experimenter 1916-1917

The Very Best From  
THE ELECTRICAL  
EXPERIMENTER 1916-1917  
anthology by  
Lindsay Publications Inc

You can go back to read the very best articles from one of the earliest hobbyist electronics magazines published. Gernsback's Electrical Experimenter was filled with basic information, ads for early equipment, and most importantly how-to projects designed to be built from the most primitive materials.

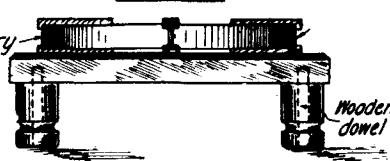
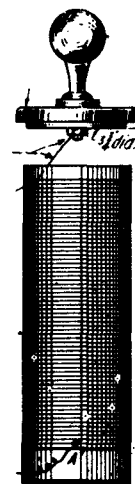
Readers learned how to build unusual crystal set receivers with unusual detectors, high power wireless sets, and all the equipment that went into their construction. Today, you buy electronic equipment, put batteries in it, and turn it on. Back then you built your batteries!

You'll find how-to articles on high voltage Tesla coils, induction coils, spark gap construction, batteries, detectors, water power systems, selenium cells for experimenting with primitive television systems, and more.

You get theoretical papers by MD's describing how new electrical equipment would revolutionize medicine. You get history on Fessenden and Tesla. You'll learn how to measure capacity, and much more.

You get the very best articles from this two year span, and by best we mean plans and information that is very difficult to find today. Many articles that cover the basics of electricity were omitted because you can find comparable material in modern magazines. Some plans were omitted because they were not unusual enough, such as motor and dynamo plans. You can find such plans in many old books.

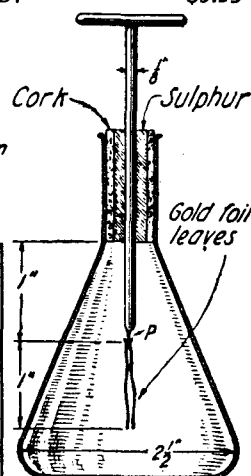
What you will find is solid, interesting and useful information. Be careful,



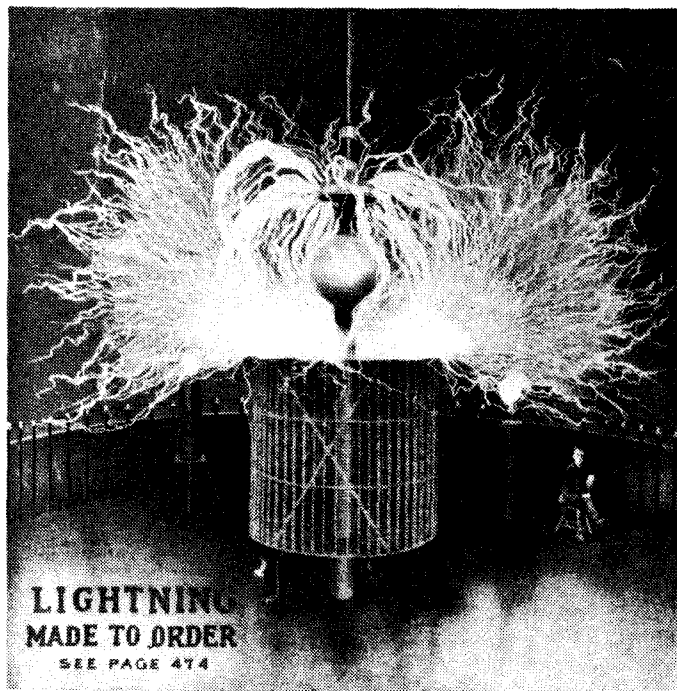
though! Some of this info is downright dangerous. You can get yourself electrocuted. You can give you and your neighbors cancer if you build and operate an X-Ray machine. Be very careful.

This is a great collection of rare material — something you should have in your reference library. Wall-to-wall illustrations! Interesting reading. Order a copy! 8 1/2 x 11 paperback 108 pages  
Cat. no. 20137

\$9.95



You should know that most of the photographs in this book are not of the best quality. Poor originals, yellowed paper, oversized pages have combined to make the photographs "muddy". The drawings are very sharp, and most type is quite readable, but the photos leave something to be desired. All we can say is that we did the best job we could. See what you think.





# High Voltage Plans!

## Plans & Instructions to Build the "MINI" TESLA ELECTRIC SPARK COIL

by John F. Nuyen

It's a small booklet, typewritten, and is not all that professionally produced. After all, Nuyen is not a slick author/publisher. He's a high voltage experimenter. In other words, this is a set of plans for a working Tesla coil written by something who has done it. It works. And you'll find a photo of the coil on the cover.

This coil uses a primary of 8 gauge wire driven by a Model-T hum coil which can be purchased from some auto supply houses (suggested sources provided.) The primary consists of 34 gauge wire wound around a 16" length of PVC tubing.

I must warn you that the how-to is not extremely detailed, but it's still quite good. Any Tesla coil experimenter would do well to have these plans.

This is a home-grown coil and a home-grown publication that you won't find in any bookstore. Look it over carefully. Brief, but fairly priced. Buy a copy and start building. 5 1/2 x 8 1/2 booklet 16 pages

Cat. no. 374

\$4.00

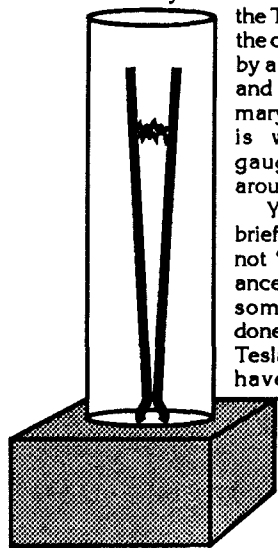
## Plans & Instructions to Build the HIGH FREQUENCY ELECTRIC COIL

by John F. Nuyen

This is actually a Oudin coil (very similar to the Tesla coil) that like the coil above is driven by a Model-T hum coil and an 8 gauge primary. The secondary is wound with 34 gauge magnet wire around paper tubes.

You'll find this is brief, typewritten, and not "slick" in appearance, but is written by someone who has done it. If you're into Tesla coils, you should have this. Order a

copy. 5 1/2 x 8 1/2 booklet 16 pages  
Cat. no. 375  
\$4.00



## Tesla Coil! Oudin Coil! Jacob's Ladder!

*Inexpensive  
booklets published  
by the builder!*

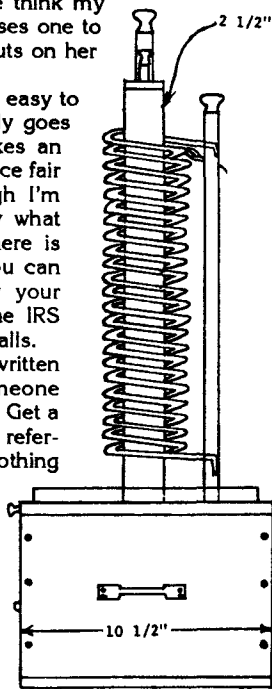
## Plans & Instructions to Build the TRAVELING ELECTRIC ARC (JACOB'S LADDER)

by John F. Nuyen

You've seen them — those two wires sticking up in the air in a "V" shape with a spark that starts at the bottom and slowly travels upward. You've seen them in the "mad scientist" movies. (I sometime think my mother-in-law uses one to see while she puts on her makeup!)

The ladder is easy to build and quickly goes together. It makes an impressive science fair project, although I'm not sure exactly what scientific use there is for it. Maybe you can use it to terrify your neighbors, or the IRS agent when he calls.

Another typewritten booklet by someone who has done it. Get a copy — for your reference library, if nothing else. 5 1/2 x 8 1/2 booklet 16 pages  
Cat. no. 376  
\$4.00

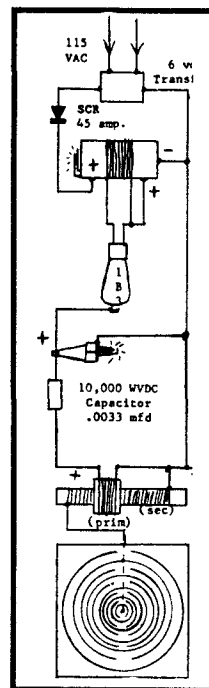


# Lakhovsky Multi-Wave Oscillator!

## LAKHOVSKY MULTIPLE WAVE OSCILLATOR HANDBOOK

compiled by Thomas J Brown

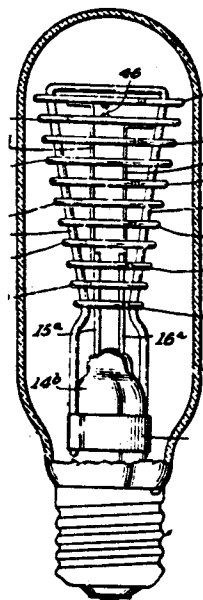
Supposedly sometime before World War II, Russian experimenter Lakhovsky asked Nikola Tesla to help him design a high voltage generator that could produce electrical energy at many different frequencies simultaneously. A model of the machine was tested by physicians of the time who found that it not only had a 98% cure rate for terminal cancer, arthritis, and other "hopeless" diseases, but that it could rejuvenate plants and animals as well.



No doubt the oscillator works and is an interesting piece of equipment, but I wouldn't stake my health or anyone else's on it. Quack medicine machines were everywhere in the 1920's & 30's. This could well be another.

In this typewritten report you get historical details, wiring diagrams, construction tips, articles on waves that heal, "documented" cases of cure, reprints of the Lakhovsky patents, and a series of reprinted magazine articles on the use of radio frequency waves to cure disease.

Modern physicians have found that electrical fields can speed healing of wounds in some instances. Perhaps this material has some merit, or perhaps it's all a hoax. Maybe it's another suppressed invention. You figure it out. You'll find it interesting reading — a very unusual collection of material. Get a copy. 8 1/2 x 11 spiral bound 156 pages  
Cat. no. 357



\$16.95



Inventions, Researches & Writings of  
**NIKOLA TESLA**  
 by Thomas Commerford Martin  
 reprinted by Lindsay Publications Inc

The greatest world's fair ever constructed was underway in Chicago in 1893. More electricity and more electric lights were used in the fair than in the entire city of Chicago. It was the electric age, and Edison was doing with commercial battle with Westinghouse and its star, Nikola Tesla.

In 1893, this volume, a comprehensive collection of Tesla's work to that point, was published. And although it is now quite rare, you can have a high quality reprint for a small fraction of what cost us to obtain an original copy.

Most people think of lightning generators when they think of Tesla, but that's a very narrow perspective. People should think of alternating current. Tesla created the power system used throughout the world today — one that operates at 50 and 60 cycles per second.

Tesla experimented with other frequencies, iron and air core transformers, as well as motors and generators. Tesla didn't just one day decide he was going to build his famous lightning bolt generator. It was but another step in a series of experiments that had begun years before. Here you get a complete record of this research up to 1893.

It's all here — the AC experiments and inventions that lead Tesla to experiment with ever higher voltages and frequencies, the neon tubes and fluorescent lights, unusual high frequency alternators and even magnet motors.

If you want to carry on Tesla's unusual research, you must walk in his footsteps. You must do your homework. Here in one volume is the early work that will help you get your mind in sync with his and perhaps suggest what he was thinking at the time, and give you ideas of where to take his experiments.

Every Tesla fan, every high voltage experimenter, and every electrical engineer should have a copy of this classic book. Just as much as Edison, Tesla created the world in which we live today. Now you can study the results of his research, attend his special exhibitions, and devour his lectures, with this single volume. Order a copy today! 5 1/2 x 8 1/2 paperback 496 pages  
 Cat. no. 4902 \$16.95

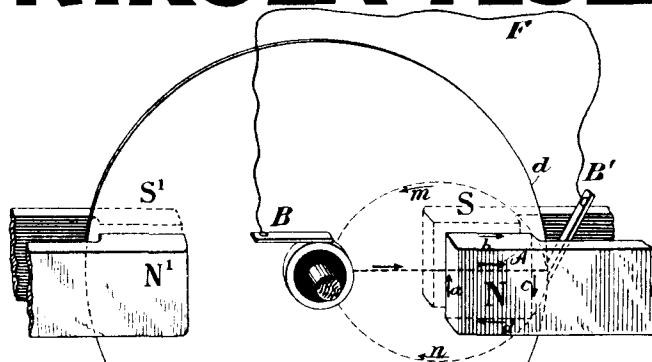
#### SPECIAL HARDCOVER EDITION

A small fraction of the print run has been reserved for libraries. This special edition may be unavailable for extended periods of time.  
 Cat. no. 4910 \$26.95

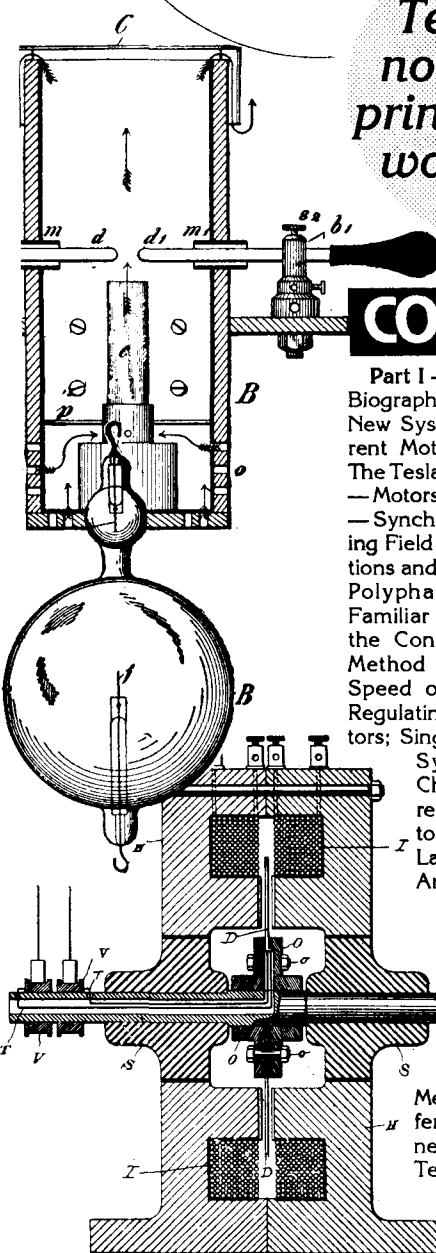
**NOT AVAILABLE AT THIS TIME**

# Inventions, Researches & Writings of **NIKOLA TESLA**

*Incredible inventions! AC Power, High Voltage, High Frequency, Oil Condensers, even magnet motors!*



**Rare 1893  
 Tesla book  
 now back in  
 print! All Tesla  
 work to that  
 date!**



## CONTENTS

**Part I — Polyphase Currents**  
 Biographical and Introductory; A New System of Alternating Current Motors and Transformers; The Tesla Rotating Magnetic Field — Motors with Closed Conductors — Synchronizing Motors — Rotating Field Transformers; Modifications and Expansions of the Tesla Polyphase Systems; Utilizing Familiar Types of Generators of the Continuous Current Type; Method of Obtaining Desired Speed of Motor or Generator; Regulating for Rotary Current Motors; Single Circuit, Self-Starting

Synchronizing Motors; Change from Double Current to Single Current Motors; Motor with "Current Lag" Artificially Secured; Another Method of Transformation from a Torque to a Synchronizing Motor; "Magnetic Lag" Motor; Method of Obtaining Difference of Phase by Magnetic Shielding; Type of Tesla Single-Phase Motor; Motors with Circuits of Different Resistance; Motor

with Equal Magnetic Energies in Field and Armature; Motors with Coinciding Maxima of Magnetic Effect in Armature and Field; Motor Based on the Difference of Phase in the Magnetization of the Inner and Outer Parts of an Iron Core; Another Type of Tesla Induction Motor; Combinations of Synchronizing Motor and Torque Motor; Motor with a Condenser in the Armature Circuit; Motor with Condenser in One of the Field Circuits; Tesla Polyphase Transformer; A Constant Current Transformer with Magnetic Shield Between Coils of Primary and Secondary.

### Part II — Tesla Effects with High Frequency and High Potential Currents

Introductory — The Scope of the Tesla Lectures; The New York Lecture. Experiments with Alternate Currents of Very High Frequency, and Their Application to Methods of Artificial Illumination, May 20, 1891; The London Lecture. Experiments with Alternate Currents of High Potential and High Frequency, February 3, 1892; The Philadelphia and St. Louis Lecture. On Light and Other High Frequency Phenomena, February and March, 1893; Tesla Alternating Current Generators for High Frequency; Alternate Current Electrostatic Induction Apparatus; "Massage" with Currents of High Frequency; Electric Discharge in Vacuum Tubes.

### Part III — Miscellaneous Inventions and Writings

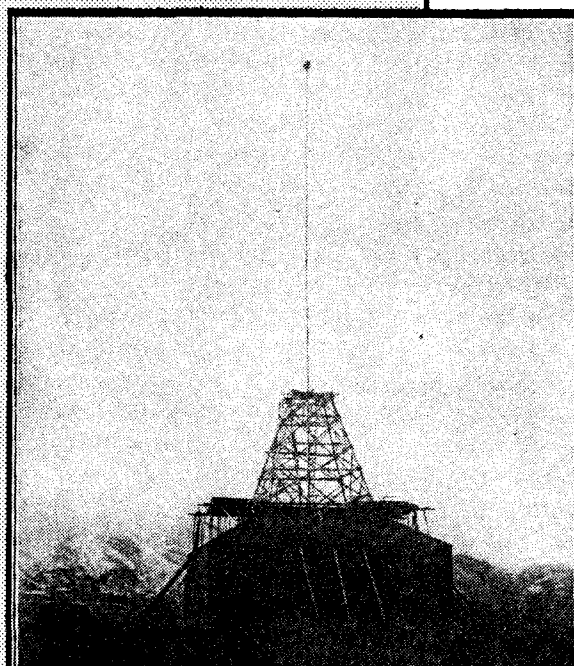
Method of Obtaining Direct from Alternating Currents; Condensers with Plates in Oil; Electrolytic Registering Meter; Thermo-Magnetic Motors and Pyro-Magnetic Generators; Anti-Sparking Dynamo Brush and Commutator; Auxiliary Brush Regulation of Direct Current Dynamos; Improvement in Dynamo and Motor Construction; Tesla Direct Current Arc Lighting System; Improvement in Unipolar Generators.

### Part IV — Appendix on Early Phase Motors and the Tesla Oscillators

Mr. Tesla's Personal Exhibit at the World's Fair; The Tesla Mechanical and Electrical Oscillators.

# Tesla's Experiments with Alternate Currents!

Power transmission without wires: the London Lecture plus a 1904 magazine article on the Colorado Springs experiments! Rare book!



Experimental Laboratory, Colorado Springs.

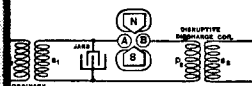
## EXPERIMENTS WITH ALTERNATE CURRENTS of High Potential & High Frequency by Nikola Tesla

"A lecture delivered before the institution of electrical engineers, London, by Nikola Tesla with an appendix by the same author on the transmission of electric energy without wire, reviewing his recent work, and presenting illustrations from the photographs never before published".

Quite a title! Quite a book! There's so much written and published about Tesla (and too much of it is pure garbage), that it is refreshing to have the inventor himself explain his experiments, theories, and plans. It's all here, every page from the original 1904 book — complete with unusual illustrations showing disruptive discharge coils, improved discharger and magnet, luminous discs, single wire and no wire motor, unusual electric lights for use with the high-frequency AC that is generated by the Tesla coil, and much more.

The last fourteen pages of the book is a reprint of Tesla's article from the March 5, 1904 issue of "Electrical World and Engineer" complete with photographs of the experimental apparatus at Colorado Springs and Long Island built to test the transmission of electrical power without wires.

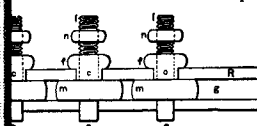
section indicated diagrammatically in Fig. 5, the currents forming the arc are much more the magnetic field exercises a greater influence of the magnet permits, however, of the field by a vacuum tube, but I have encountered



### DISCHARGER WITH LOW-FREQUENCY ALTERNATOR AND IMPROVED DISCHARGER.

Difficulties in working with an exhausted

discharger used in these and similar apparatus indicated in Figs. 6 and 7. It consists of a piece of c c (Fig. 6), each of which comprises



### DISCHARGER WITH MULTIPLE GAPS.

The portion m with an extension e below—used to fasten the piece in a lathe when discharging surface—and a column above, of a knurled flange f surmounted by a carrying a nut n, by means of which a

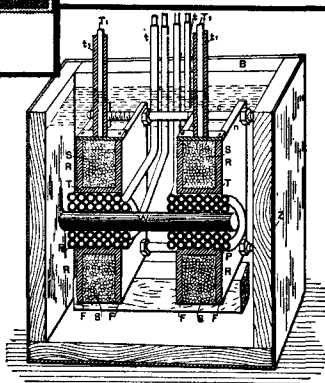


Fig. 2.—DISRUPTIVE DISCHARGE COIL.

coil and other apparatus used in the experiments with the disruptive discharge this evening.

It is contained in a box B (Fig. 3) of thick boards of hard wood, covered on the outside with zinc sheet Z, which is

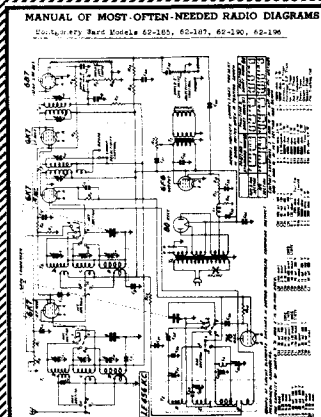
Anyone who studies Tesla, builds his coils, or wants to perfect the inventions that Tesla didn't have time to finish should have a copy of this book. The writings of Tesla himself should be the cornerstone of any Tesla library, and here is your chance to get your own copy of this now-rare book. Interesting reading. Historically important. Get a copy.

5 1/2 x 8 1/2 paperback 170 pages.

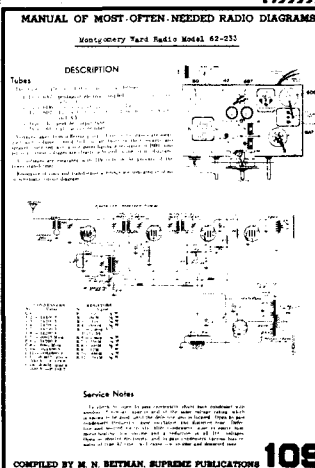
Cat. No. 4392

\$9.95

# Old Radio Diagrams!



108



109

## Most Often Needed 1926-1938 RADIO DIAGRAMS and Servicing Information compiled by M. N. Beitman

Reprinted from out of the past is this great collection of wiring diagrams and service tips on most of the radios likely to be encountered by a radio serviceman in 1938.

You get not only the circuit diagram but in many cases parts numbers, voltage measurements at critical points, chassis drawings, alignment specs for superheterodynes, and more.

You'll find mostly diagrams for superhets, but there are a few regens from the "old days". Many receivers have shortwave bands. And although I consider myself at least somewhat knowledgeable about old radio technology there are tube numbers used here that I've never even heard of!

If you collect radios or like to build old sets using old parts, this is for you. You'll find everything from Atwater-Kents to Zenith radios listed. A valuable reference. Good stuff. Consider it carefully. 8 1/2 x 11 paperback 240 pages

Cat. no. 362

\$11.95

# Tesla Coil Secrets!

## TESLA COIL SECRETS

by R. A. Ford

Be the first on your block to blast your neighborhood with high voltage! Shock the socks off your friends and relatives! Zap those pesky cats digging in the garbage can! Make people think you really are building a Frankenstein monster in your basement!

As you know, a Tesla coil is a high voltage transformer. Nikola Tesla used it at the turn of the century to generate lightning bolts and to investigate the wireless transmission of electrical power.

This fascinating book is not really a how-to-build book. Actually, an avid researcher who has built several coils and has accumulated articles, clippings, notes, and bits-and-pieces over the years has opened up his scrapbooks to us.

You'll see all the interesting hints, plans, and wiring diagrams gleaned from early magazines that ceased publication decades ago along with formulas, notes, and observations he believes are important for building powerful coils. Many of the old articles are so detailed that you can probably use them to build a powerful experimental coil. There are notes on one machine the could kick out five foot lightning bolts!

If you're really into Tesla coils, you may have seen a few of these clippings already. But I'll bet there are others you haven't seen. You'll get info on rotary spark gaps, anti-kick-back devices, Leyden jar capacitor construction, conical Tesla coils, Oudin coils, and suggestions on research into wireless power transmission, plant growth stimulation, medical uses, and more.

Many of the reprinted articles are fuzzy and a few hard to read. Most have been enlarged to bring out the construction details, and have been

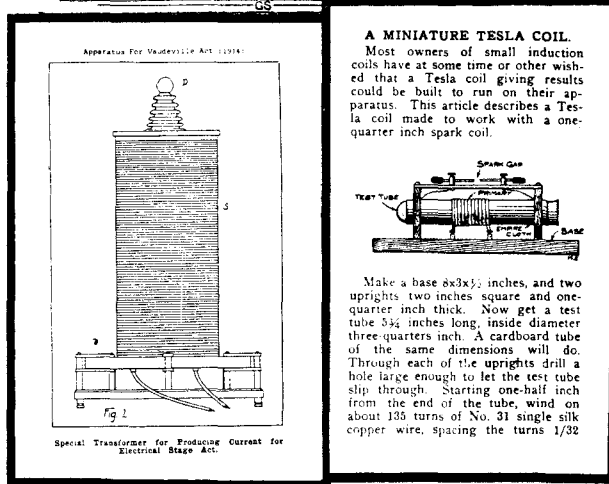


Tesla didn't have time to pursue or reveal.

Rare info! Too bad the book isn't ten times bigger. Get a copy for the reference library if for no other reason. Interesting reading. Recommended!

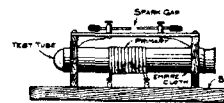
5 1/2 x 8 1/2 paperback 74 pages  
Cat. no. 4317 \$6.95

## Private Notebook of Tesla Coil Builder



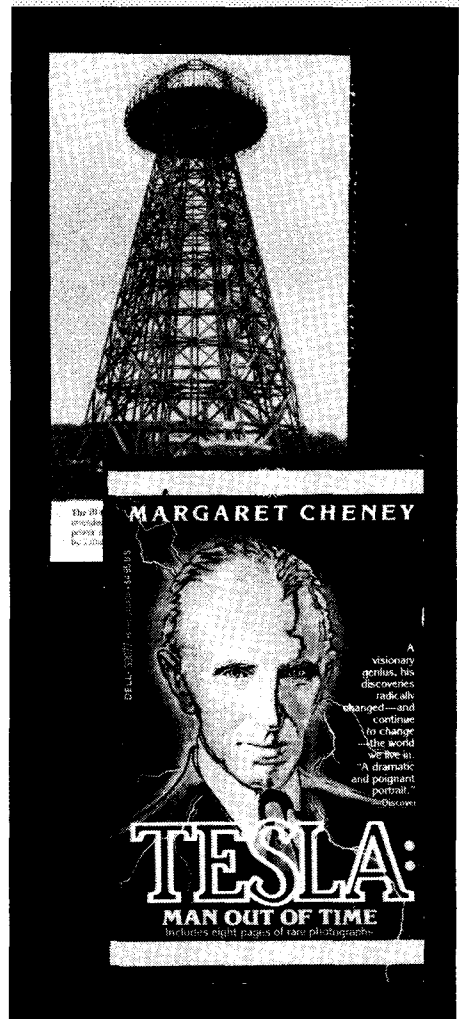
### A MINIATURE TESLA COIL.

Most owners of small induction coils have at some time or other wished that a Tesla coil giving results could be built to run on their apparatus. This article describes a Tesla coil made to work with a one-quarter inch spark coil.



Make a base 8x3x1/2 inches, and two uprights two inches square and one-quarter inch thick. Now get a test tube 3/4 inches long, inside diameter three-quarters inch. A cardboard tube of the same dimensions will do. Through each of the uprights drill a hole large enough to let the test tube slip through. Starting one-half inch from the end of the tube, wind on about 135 turns of No. 31 single silk copper wire, spacing the turns 1/32

## Who Was Nikola Tesla?



### TESLA: MAN OUT OF TIME

by Margaret Cheney

"Flamboyant, eccentric, almost supernaturally gifted, had he been born today he would still be ahead of his time. Called a madman by some, a genius by others, and an enigma by nearly everyone, Nikola Tesla was perhaps the greatest inventor the world has ever known..."

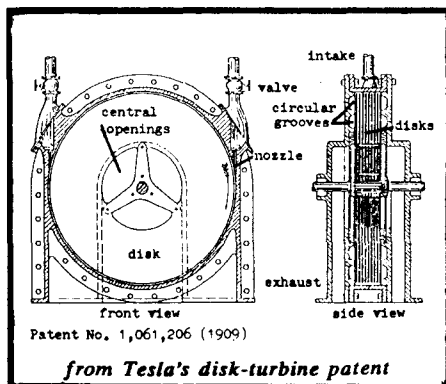
"It was Tesla who harnessed the alternating electrical current that we use today... Tesla who actually invented radio... Tesla who invented fluorescent lighting and the incredible bladeless turbine. He introduced us to the fundamentals of robotics and computer and missile science, which continued to create and transform the future..."

There are many books about Tesla, some of them are garbage written by groupies who worship Tesla as a god. Here's a great factual biography that has gotten great reviews — the story of a wizard who was Edison's enemy, Mark Twain's friend, and J. P. Morgan's client. This is the real story. Excellent book at a reasonable price. Order a copy. 310 pages "mass" paperback a few photos

Cat. no. 717 \$5.95

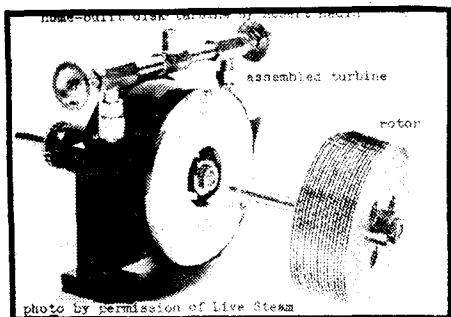


# TESLA'S LOST Inventions!



## TESLA: The Lost Inventions by George Trinkaus

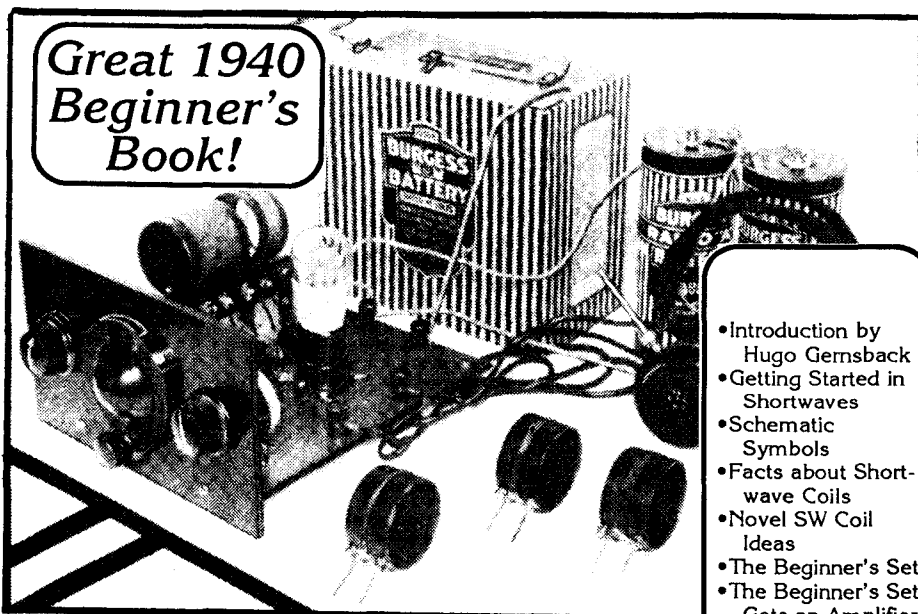
"Here are the suppressed inventions of Nikola Tesla all in one place rendered in clear English and in 42 illustrations. Tesla was famous at the turn of the century for inventing the alternating-current system still in use today. But his later inventions, documented in some 30 U.S. patents between 1890 and 1921, have never been utilized as Tesla intended despite their obvious potential for advancing in fundamental ways the technology of modern civilization. Among these lost inventions: the disk-turbine rotary engine, the tesla-coil electric energy magnifier, high-frequency lighting systems, the magnifying transmitter, wireless power, and the free-energy receiver." —from the front cover.



Like Trinkaus's other Tesla book, the only major criticism that can be leveled here is that the chapters are too short. On the other hand, even if each topic were expanded into a full-blown book, you would probably find Tesla so interesting that your curiosity would still not be satisfied.

Interesting, unusual information, especially if you're just beginning your study of Tesla. Fairly priced. 8 1/2 x 7 booklet 34 pages  
Cat. no. 748 \$5.95

## Great 1940 Beginner's Book!



# Shortwave Beginner's Book

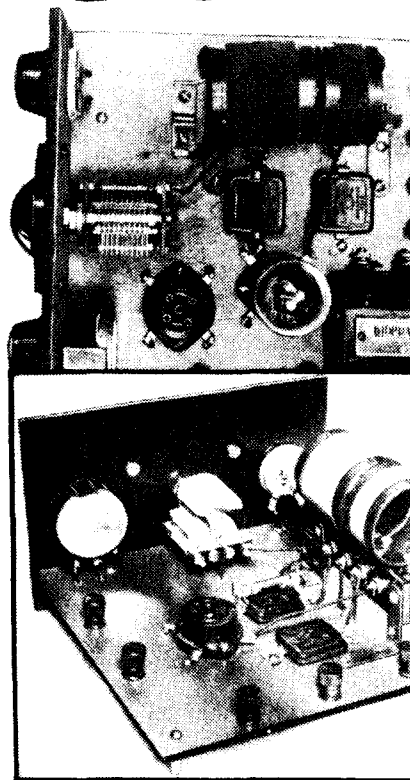
SHORTWAVE  
BEGINNER'S BOOK  
by Radio & Television  
Magazine  
reprinted by Lindsay  
Publications

The full title is "Short Wave Beginner's Book including a complete course of instruction in shortwave; details for making short-wave aeri-als; a complete beginner's set; coil winding data; operating kinks." And it's 36 pages of dynamite ideas from 1940.

Short Wave Beginner's Book was targeted for the raw beginner. It explains everything in detail, showing the reader not only the schematic but diagrams of what wire to hook where. Even templates are provided for drilling the chassis. Very little is left to the imagination.

True, the sets are not overly sophisticated, but they're a great place to start. For instance the beginner's set uses a single 30 vacuum tube with a 45 volt B battery. In the next chapter another 30 tube is added as an audio amplifier.

You get excellent discussions on topics such as coupling amplifier circuits, insulators



that can be used on shortwave antennas, and code practice oscillators. And everything is nicely illustrated.

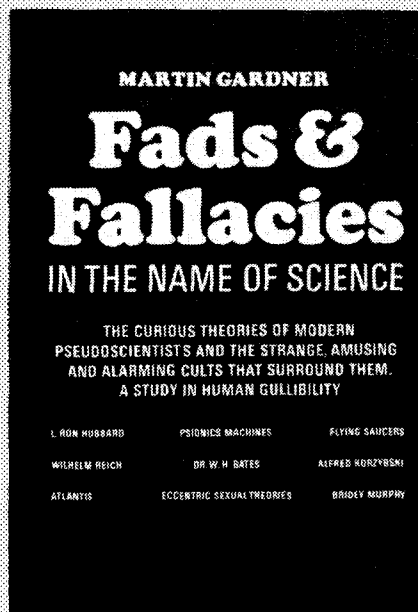
Here's another fun old-time shortwave radio book you should have. And it's reasonably priced! It's another MUST for your old time radio book collection. Order a copy. 7x9 booklet 36 pages

Cat. no. 4961

\$4.95

- Introduction by Hugo Gernsback
- Getting Started in Shortwaves
- Schematic Symbols
- Facts about Short-wave Coils
- Novel SW Coil Ideas
- The Beginner's Set
- The Beginner's Set Gets an Amplifier
- Smoothing Up the Regeneration Control
- New Kinks for the SW set
- Which Regeneration Scheme?
- Tuning the Short Wave Receiver
- How to Make Worth-While Audio Amplifiers
- Short Wave Operating Hints
- Coupling the RF Stage to Detector
- Audio Amplifiers for SW Sets
- Methods of Coupling to Speakers
- Aerials for Short-Wave Receivers
- Good Antenna Design
- Some Things You Don't Know About Aerials
- Learning the Code
- Home-Made Antenna Coupling Condensers
- A Panel Mounting SW Coil Assembly
- A Meter-Kilocycle Conversion Chart

# Unusual Science Beliefs Attacked...



## FADS & FALLACIES In the Name of Science by Martin Gardner

If you find "Fringe Science" impossible to believe, you'll find this book right down your alley. Gardner presents his views on "the curious theories of modern pseudoscientists and the strange, amusing and alarming cults that surround them. A study in human gullibility."

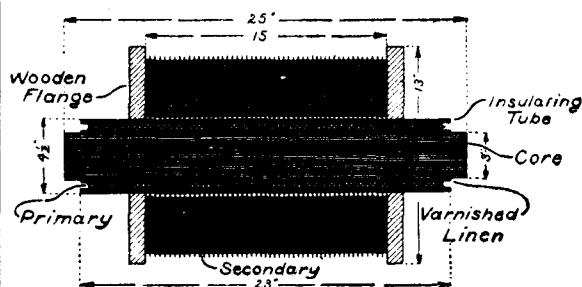
Gardner tears apart Symmes and his hollow earth theory, Velikovsky and wandering planets, the multiple moon theories of Horbiger & Bellamy, Charles Fort and the Fortean society, dowsing and other strange methods of finding natural resources, naturopathy, iridagnosis, zone therapy, food fads, orgone sex energy by William Reich, L. Ron Hubbard and dianetics, Korzybski and his General Semantics, Atlantis, flying saucers, and Bridget Murphy.

Gardner shoots them down, and many of them deserve it. But whether you agree with Gardner or not is immaterial. Here, you'll read about many strange ideas for the first time. You can read Gardner's point of view and then do your own research and decide whether you want to agree with him. What I especially like is the appendix that lists many unusual articles and books along with fascinating footnotes.

In other words, Gardner may attack something you really believe in, but in doing so might very well provide you with new directions for your own investigations.

No matter what side of the fence you're on, you'll enjoy this. Wall-to-wall unusual material. A lot of interesting book for the money. You can't afford NOT to have a copy. 5 1/2 x 8 1/2 paperback 363 pages  
Cat. no. 737

\$6.95



# High Power Wireless Equipment!

## HIGH POWER WIRELESS EQUIPMENT

by Alfred Morgan

reprinted from

Popular Electricity Magazine 1910-11

If you wanted to try your hand at the newest 1910 electrical craze of transmitting telegraphy without wires, you had to build your equipment. The few pieces of equipment available commercially would probably have been way beyond your pocket book.

Here, in a series of fifteen installments, Alfred Morgan provided his readers with complete, detailed, dimensioned directions for building everything from the key to the aerial, from the induction coil and spark gap, to the helical transmitting coils. As a slice of early radio history this is fascinating reading.

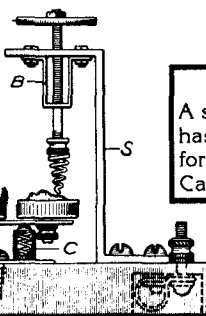
You won't want to build a spark-gap transmitter, they're inefficient and illegal to operate. But you'll find bits and pieces quite valuable. If you build crystal sets,

you'll find the detectors very valuable.

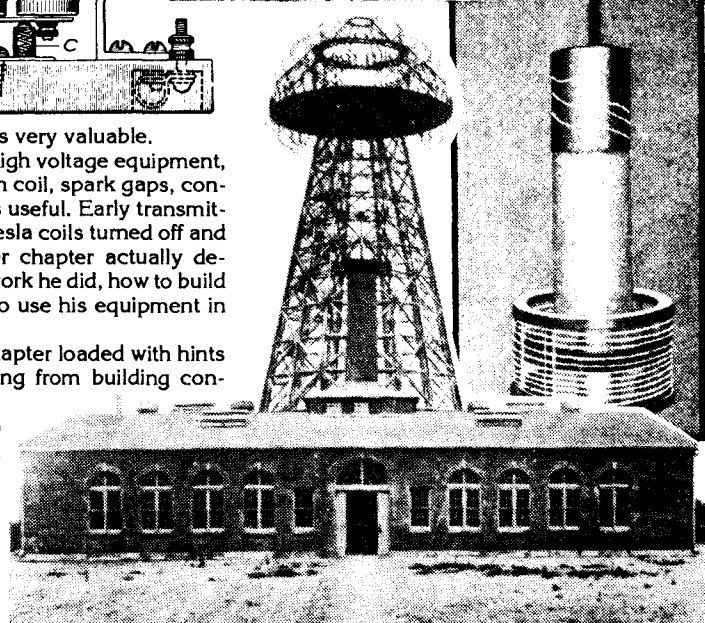
If you like to build high voltage equipment, you'll find the induction coil, spark gaps, condenser and other plans useful. Early transmitters were essentially Tesla coils turned off and on with a key. A later chapter actually describes Tesla and the work he did, how to build one of his coils, how to use his equipment in wireless telegraphy.

And you'll find a chapter loaded with hints and kinks on everything from building condensers and using a coherer detector to how enamel wire and make a variometer.

This is all practical hands-on early radio and high-voltage electricity reprinted from the original hard-to-



**HARDCOVER EDITION**  
A small portion of the print run has been beautifully hardbound for libraries and collectors.  
Cat. no. 4970 \$15.95



## CONTENTS:

- Aerials
- Aerial Switch & Induction Coil
- Induction Coil Secondary; Key
- Independent Adjustable Interrupter
- Oscillation Condenser
- Transmitting Helix
- Hot Wire Ammeter
- Two KW Closed Core Transformer
- Two KW Transformer Cont'd
- Detectors
- Detectors Cont'd
- Potentiometer; Fixed Condenser
- Loose Coupled Tuning Coil
- Variable Condenser
- Directions for Operating
- Tesla and His Wireless Age
- Construction of Tesla High-Frequency Apparatus
- High Frequency Apparatus for a Wireless Set
- Hints and Kinks

## Tesla Equipment, Crystal Detectors, Rare Radio Equipment from 1910-11! Great How-To!

find magazines. Think about the possibilities. It might be fun to build an old wireless station just to show people today how it was done before semiconductors. No matter what your angle or interest is, you'll find this detailed how-to to be fascinating. Excellent rare, early information! Order a copy of this. It's worth having.

5 1/2 x 8 1/2 paperback 99 pages  
Cat. no. 4953

\$9.95

[illegible]

You can find many different welders on the market, so why even consider building one? Maybe you can save money. Perhaps you need something bigger than 200 amps and want to scale up a standard design. Of course, there's always the pride of being able to say you built it yourself. Or perhaps you would just like to know how they work.

You will **NOT** get complicated theory. You get information that has been learned by study and by doing, rather than from designing transformers as a profession. You'll learn the unique aspects of controlling heavy welder currents. This is information generally available nowhere else. After reading and studying this manual, you'll probably want to refer to other books which cover heavy transformer design theory, details on silicon steel, wire types, design problems and much more.

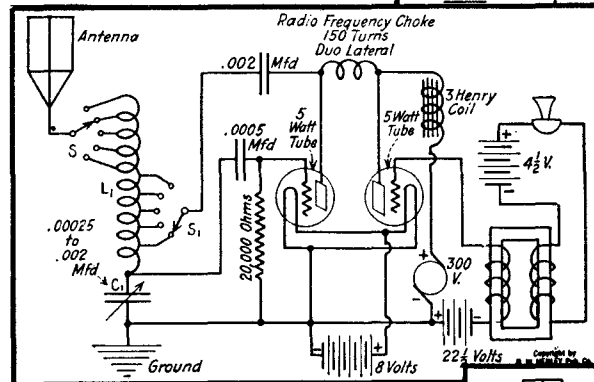
Get a copy of this hot little manual. You'll find that it is very clearly written and easy-to-read. This is the **FIRST** book you should consider before building or even possibly repairing a transformer welder. Order a copy today. 5 1/2 x 8 1/2 30 pages.

\$4.00

## HENLEY'S 222 RADIO CIRCUIT DESIGNS

Wow! If you're into building old time radio circuits or just reliving those old days, you **MUST** have this incredible book of schematics from 1924!

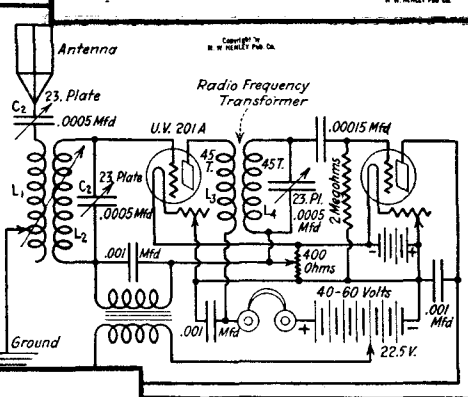
The subtitle reads: "A comprehensive and up-to-date collection of modern receiving and transmitting circuits with complete design data showing the electrical values of inductances, capacities and resistances with the name of each element



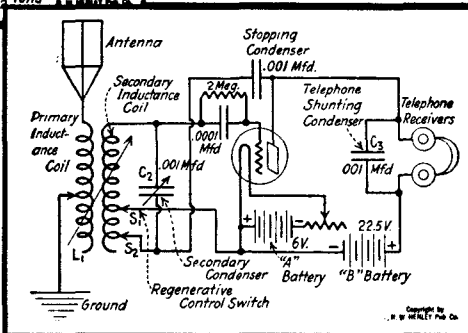
You get loads of circuits on all kinds of equipment. For instance chapter six presents 25 different schematics for the basic crystal set using every conceivable type of loading and tuning arrangement.

After chapter eight on audio amplifiers comes chapter nine on miscellaneous circuits which include

- 
- Antenna
- Variable Series Condenser
- Crystal Detector
- Variable Inductance
- Primary Condenser
- Telephone Shunting Condenser
- Switch
- $L_1$
- $L_2$
- $C_2$
- $C_3$
- .001 Mfd.
- Telephones
- Ground
- Tuning Variable Condenser
- Copyright by  
R. M. M. Co.



***Incredible  
collection  
of radio  
plans from  
1924!***



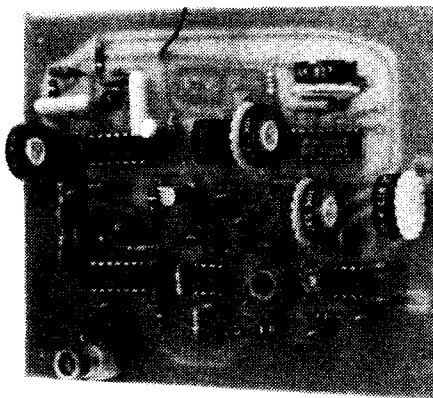
- The final section of circuit diagrams reveals designs for spark, CW, modulated CW and AM transmitters. Transmit from your car, through power lines, or from aerials!

If you love to look at old circuit diagrams and relive the days of radio when sets were simple and components hot and heavy, then this book is for you. You won't find any 1/4 watt resistors, DIP IC's, or LED's. You have better be looking for iron core audio transformers, carbon microphones, and (4V203's!

Absolutely great book! Great fun! A must have! Order a copy. You'll like it. 5 1/2 x 8 1/2 paperback 271 pages

\$11.95





## Video Scrambling Secrets!

**VIDEO SCRAMBLING & DESCRAMBLING**  
for Satellite & Cable TV  
by Graf & Sheets

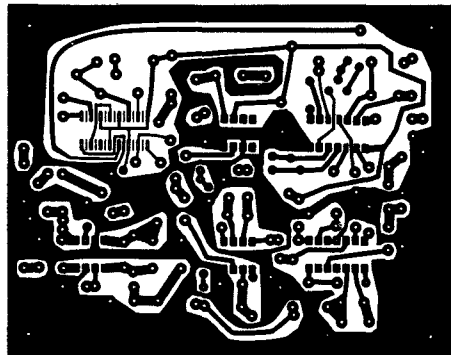
If you have purchased or plan to purchase a satellite dish to capture signals coming from the many Earth-orbiting satellites, this book is for you.

You get:

- An understanding of encoding/decoding systems
- The theory and techniques of video encryption and decryption
- An overview of the rules and regulations governing the availability and use of satellite signals, antennas, and programming materials
- Schematics and details for several encoder and decoder projects.

Originally published in 1987, this book provides detailed information on everything from simple cable encryption systems to commercial satellite systems such as VideoCipher II™, the B-Mac System, and even the Data Encryption standard.

Although the authors are quick to point out that the information is not to be misused in theft of signal, they have provided a wealth of schematics, printed circuit board layouts, IC chip specs, patent reprints, list of satellites and the scrambling systems they use and much more. This is a quality master reference that any video/satellite fanatic will find useful. Order a copy today! 8 1/2 x 11 paperback 246 pages Cat. no. 370 \$19.95



## Official 1934 Shortwave Radio Manual

Official 1934  
**SHORT WAVE RADIO MANUAL**  
edited by Hugo Gernsback & H W Secor  
new chapter by T. J. Lindsay

Build simple, high-performance old timeA shortwaver radios! You can. All of the secrets are here: the circuit diagrams, parts layout, coil specifications, construction details, operation hints, and much more.

Back in the 20's and 30's the only low-cost way of listening in on the newly discovered and fascinating shortwave radio frequencies was to build a set. Shortwave construction magazines flourished, even during the depression.

This is a compilation of construction articles from "Short Wave Craft" magazine. It's wall-to-wall how-to.

At the rear of the book are circuit diagrams, photographs, and design secrets of all shortwave receivers being manufactured in 1934 including some of the most famous: SW-58, the SW-5 "Thrill Box", the deForest KR-1, the Hammurand "Comet Pro", and many more.

You'll find that all the circuits use tubes since transistors hadn't yet been invented. And you'll also find that the original tubes listed are usually difficult to find today. Included is a new chapter showing how you can use transistors to replace hard-to-find vacuum tubes. You'll even see the circuit that was lashed together on a table top one night using junk box parts, one of my wife's hair curlers and alligator clips. When I hooked it up to an antenna strung across the basement ceiling and attached a 9 volt battery, signals started popping in like crazy. In a couple of minutes I heard an urgent message from a ship's captain off Seattle asking for a navigator to help him through shallow water. Not bad, considering I live near Chicagol

These small regenerative receivers are extremely simple, but do they ever



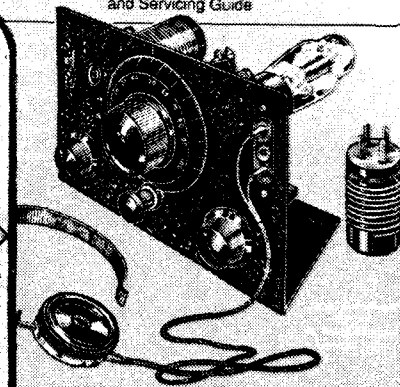
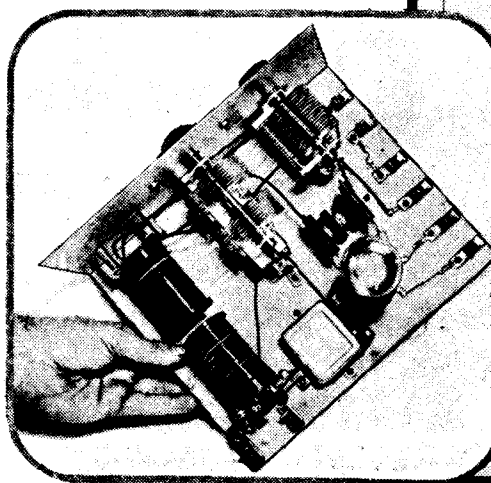
perform! I've built dozens of them, and they never fail to amaze me! Even master machinist, Dave Gingery has built these sets.

This is the nuts for the experimenter, the survivalist who is concerned about basic communication, shortwave listeners, ham radio operators who collect old receivers, and just about anyone interested in old-time radio.

Great book. Best old-time radio book I've ever seen. And I look at every one I can get my hands on. Consider it carefully. Even if you never build one of these radios, you'll get hours of enjoyable reading out of this book. Top rate. Order a copy. 8 1/2 x 11 paperback 260 pages Cat. no. 4643 \$14.95

## 1934 Official SHORT WAVE Radio Manual

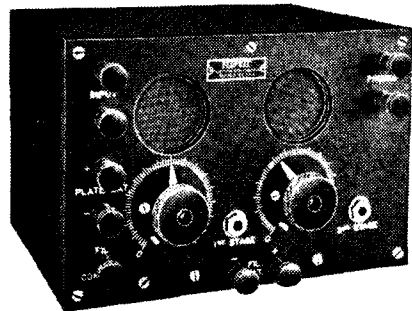
Complete Experimenter's Set-Building and Servicing Guide



reprinted by Lindsay Publications Inc

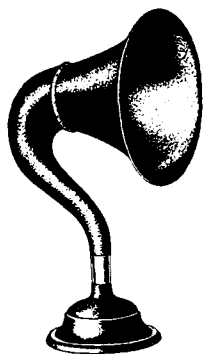
# Radio of the 1920's!

*Incredible collection of ads, photographs, magazine articles!*



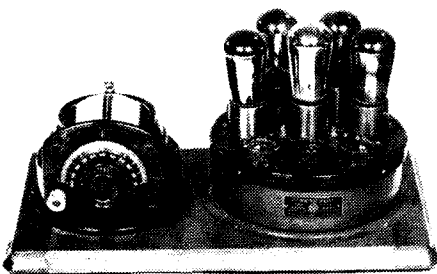
## RADIO MANUFACTURERS OF THE 1920's by Alan Douglas

If you love old radio equipment like I do, you'll really enjoy this. This, the first of several volumes, covers apparatus manufactured by A-C Dayton through J. B. Ferguson.



You get a big book of wall-to-wall illustrations of home console radios, crystal sets, regenerative sets sold to receive messages from MacMillan's North Pole expedition in 1925, ads for parts, magazine articles taking you inside radio factories and much more.

This is nostalgia, rather than how-to. But! If you're building old circuits, doing restorations, or just want to build a radio that looks old, you'll find more ideas than you can ever use. You'll like this "time

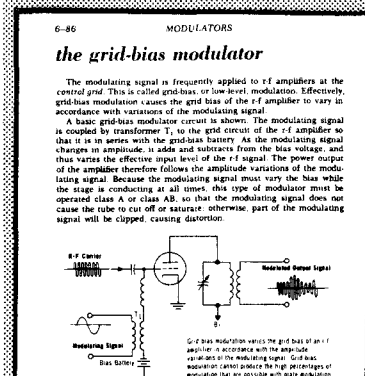


machine" back to the 1920's when radio was taking off.

As an old radio buff, I wish I had published this. I think you'll like it, too. 8 1/2 x 11 paperback 225 pages  
Cat. no. 356

\$19.95

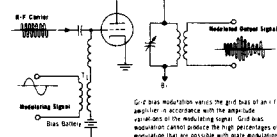
# Incredible Electronics Textbook!



## the grid-bias modulator

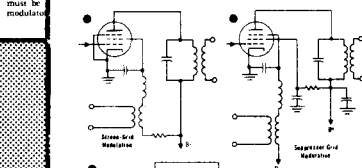
The modulating signal is frequently applied to r-f amplifiers at the control grid. This is called grid-bias, or low-level, modulation. Effectively, grid-bias modulation causes the grid bias of the r-f amplifier to vary in accordance with variations of the modulating signal.

A basic grid-bias modulator circuit is shown. The modulating signal is coupled by transformer T<sub>1</sub> to the grid circuit of the r-f amplifier so that it is in series with the grid-bias battery. As the modulating signal changes in amplitude, it adds and subtracts from the bias voltage, and thus varies the effective signal level of the r-f signal. The power output of the amplifier therefore follows the amplitude variations of the modulating signal. Because the modulating signal must vary the bias while the stage is conducting at all times, this type of modulator must be operated class A or class AB, so that the modulating signal does not cause the tube to cut off or saturate; otherwise, part of the modulating signal will be clipped, causing distortion.

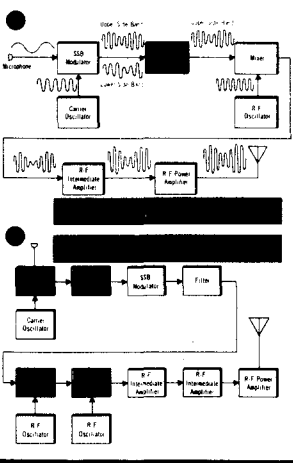


## other AM modulators

Although grid-bias and plate modulation are the two most widely used methods of producing AM signals, other methods, in which the modulating signal is applied to the screen grid, the suppressor grid, or the cathode, are also used. Typical circuits for these three modulation methods are shown.



## the single side-band AM transmitter (cont.)



## ELECTRONICS 1-7 2nd Edition edited by Harry Mileaf

I've seen a thousand electronics books from the oldest to the newest, and in my opinion, this one of the very best I've seen. If you're new to electronics or just need a great reference for those areas in which your knowledge is weak, then this book is for you.

What I like is the simply written, yet detailed and complete text and the clear informative illustrations that drive home the lessons being taught. Some books race through complex topics and don't really explain themselves. Not

## You'll find almost everything!

DC signals  
AC signals  
modulation  
side bands  
side-band modulation  
AM  
FM  
pulse modulation  
multiplexing  
television  
stereo FM  
navigation signals  
facsimile  
mixing frequencies  
waveshaping  
harmonics  
power supplies  
amplifiers  
modulators  
demodulators  
limiter  
separator  
AFC circuits  
AGC circuits  
counters  
gates  
traps  
feedback circuits  
AM transmitters & rcvrs  
FM transmitters & rcvrs  
UHF rcvrs  
RDF finders  
vacuum tubes  
diodes  
triodes  
triode operation  
load lines  
bias tetrodes  
pentodes  
phototubes

magnetrons  
klystrons  
semiconductor theory  
PN diode  
junction capacitance  
zener diodes  
tunnel diodes  
junction transistors  
gain  
transistor circuits  
bias & stabilization  
oscillation  
frequency response  
thyristors  
field-effect transistors  
FET circuits  
integrated circuits  
rectifiers  
filters  
load resistors  
voltage dividers  
voltage multipliers  
phase splitters  
RF amplifiers  
frequency-multipliers  
LC oscillators  
crystal oscillators  
RC sine-wave oscillators  
relaxation oscillators  
mixers  
converters  
discriminators  
gating circuits  
counters circuits  
limiter circuits  
antennas  
and much, much MUCH more!

here! The authors take their time and really teach.

Originally, this book was issued as seven paperbacks, no doubt for schools. Here you get all seven books in a single hardcover volume. Yes, it's expensive, but it's cheaper than buying the individual volumes, and you definitely get your money's worth. The table of contents alone, is eighteen pages long!

This is not a how-to projects book. This is a textbook that teaches the electronic principles behind the equipment you buy and build. You'll learn the complex terms, how components work by themselves and together to build up complex systems.

Again, this one of the very best electronics course I've seen. If you need just one good electronics book then this is it. There are many other good ones on the market, but I'd put my money on this one any day. (I wish I had published it!) Great book. This should be on every electronics-buff's reference shelf. Order a copy! 6x9 hardcover almost 1000 pages wall-to-wall illustrations  
Cat. no. 363

\$42.95

# Gernsback's EDUCATIONAL LIBRARY

**Gernsback's Educational Library**  
reprinted by Lindsay Publications

In the late 1930's Hugo Gernsback's Radio Publications company in New York published a series of ten shortwave radio booklets to satisfy the public's growing interest in building and operating shortwave sets.

Each booklet is 32 pages in length, is well illustrated, and has a brilliant yellow cover. Each covers a different topic from radio construction to electrical experiments to television.

You'll find these little booklets fascinating reading, full of ideas, and you'll find each to be a slice of early radio history back when radios were built on breadboards with handtools instead of printed circuits.

The original booklets were printed during the Great Depression on inferior quality paper and are now quite rare. But you can get high quality copies on quality paper and enjoy them again.

Order a set today!

## No. 1 How to Build 4 DOERLE SHORTWAVE SETS

Build the 2-tube 12,500 mil "Doerle" short-wave receiver and the 3-tube signal gripper. You then get instructions on modifying these two basic radios into a bandsread receiver and an 110 VAC operated version.

Cat. no. 820 \$2.25

## No. 2 How to Make Most Popular All Wave 1 and 2 TUBE RECEIVERS

Build a Megadyne one-tube loudspeaker set, a beginner's 1 tube AC-DC set, a four-in-two all-wave all electric 2-tube set, a super-regenerative single-tube loudspeaker set, a portable 2-tube battery loudspeaker receiver, and a beginners' one-tube all-wave battery set.

Cat. no. 821 \$2.25

## No. 3 ALTERNATING CURRENT FOR BEGINNERS

Study theory, and perform home experiments with AC such as lighting a lamp induction, making a simple electric horn, watch demagnetizer, simple test for motor armature defects, bell-ringing transformer, charging storage

batteries from an AC source, simple test for condensers, AC electromagnets, magnetic levitation, simple motors, lamp dimmer, and more.

Cat. no. 822 \$2.25

## No. 4 ALL ABOUT AERIALS

Part one covers receiving antennas with notes on tuned antennas, broadcast antennas, low impedance transmission line, doublets for shortwave, transposed leadin, a SW antenna tuner, antenna construction, a double-doublet all-wave antenna, doublet installations and more. Part II covers transmitting antennas for amateur stations including the half-wave antenna, output matching circuits, construction, the Zepp, a counterpoise system, and more.

Cat. no. 823 \$2.25

## No. 5 BEGINNERS' RADIO DICTIONARY

A complete 32 page dictionary for beginners. Obviously, most the terms are still in use, but some are not. Brief definitions and a number of illustrations are provided. Learn about acceptors, counterpoise, ferromagnetic modulation, interrupter, keying flicker, strays, water rheostat and much more.

Cat. no. 824 \$2.25



## No. 6 How to HAVE FUN WITH RADIO

Unusual experiments! Try the "Talking Newspaper" which is nothing more than a loudspeaker made from aluminum foil and newspapers! Also try talking gloves, radio electric chair (put a frying pan in your pants), visual music, dancing to silent music, musical and talking gadgets, the radio dancer, home broadcasting, the door that talked, and more!

Cat. no. 825 \$2.25

## No. 7 How to READ RADIO DIAGRAMS

Learn how to translate radio diagrams into physical equipment. You get pictures, definitions, and equivalent symbols of radio components. Then you'll see circuit diagrams for a variety of circuits from crystal sets to multi-tube radios as well as the physical layout they represent. Basic information, but essential to



radio newcomers in 1938.

Cat. no. 826 \$2.25

## No. 8 RADIO FOR BEGINNERS

Learn about wave analogies, principles of transmitting, and receiving principles. A lengthy section on receiving instruments will show you how tank circuits tune to particular wavelengths and how tubes and other components perform their jobs. You also get a section on antennas and aerials. Another essential booklet for the beginner.

Cat. no. 827 \$2.25

## No. 9 SIMPLE ELECTRICAL EXPERIMENTS

Build a galvanometer, experimental magnet, simple motor, electric shocker, microphone, arc lamp, electric furnace, arc welder, a home-made key, batteryless flashlight and more. Perform tricks with telephone receivers and experiments with lamps, neon lamps, condensers, talking condensers, static electricity, and more. You'll find a brief section on making a magnet, on rheostats and how to use them, rectifiers, simple measuring instruments, heat or cold from junction of dissimilar metals, handy wire gauge, musical instruments, and more.

Cat. no. 828 \$2.25

## No. 10 TELEVISION

In 1938 this was high-tech electronics! You get a primer of television, including details on mirror scanning, Scophony system, and movies for television. Study the kinescope or cathode ray tube and how the sweeping beam is synchronized. Learn about receiver antennas, how TV programs are broadcast, network TV, and even a Scophony system for color television! Quite interesting.

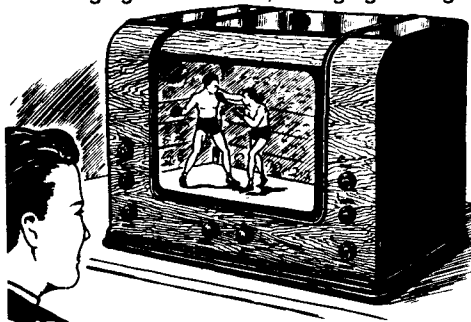
Cat. no. 829 \$2.25

### PACKAGE Numbers 1 through 5

Get all five for one lower price. Save \$1.30  
Cat. no. 930 \$9.95

### PACKAGE Numbers 6 through 10

Get all five for one low price. Save \$1.30.  
Cat. no. 931 \$9.95



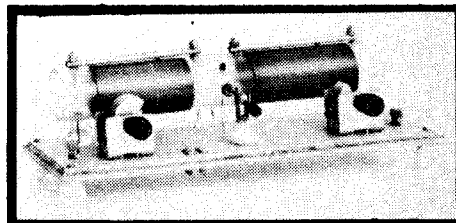




## RADIOS THAT WORK FOR FREE

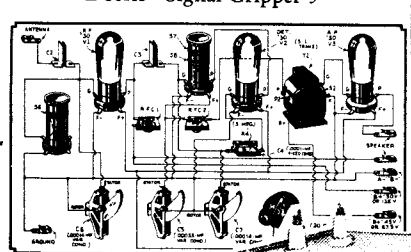
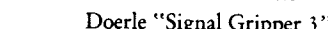
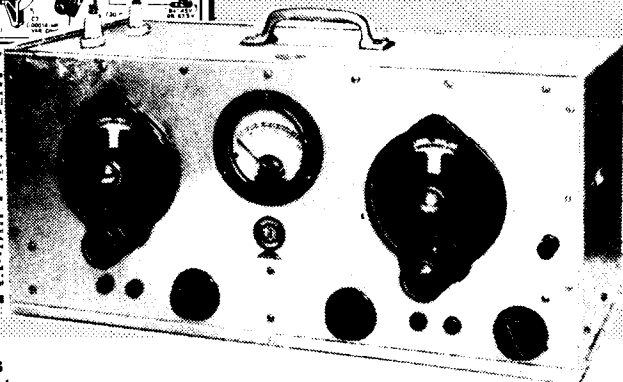
by K.E. Edwards

**\$7.95**



## Some of the circuits you'll find:

and much more....

[illegible]

This is one big, fun picture book of radio circuits. It's broken into six broad sections entitled Straight S-W Receivers, S-W Super-

## Cat. no. 20382

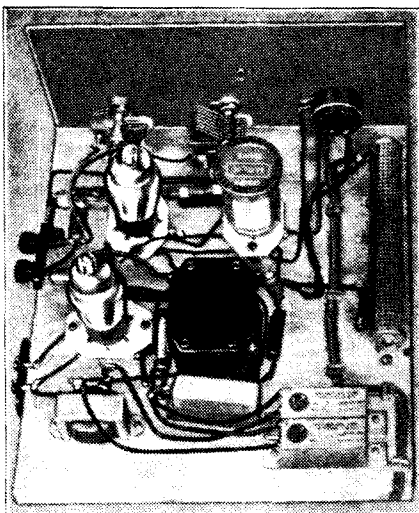
**\$7.95**

## HAMMARLUND SHORT WAVE MANUAL

Third Edition  
reprinted by Lindsay Publications Inc

For only ten cents you could by this 32 page booklet and choose which of the twelve different shortwave radios you wanted to build. These were the depression years, and Hammarlund, one of the most reputable manufacturer of radio parts, was eager to sell you what you needed to build a low-cost receiver.

You'll like this! The plans offer interesting detailed text that makes construction easy along with the basic schematic diagram, a parts connection diagram, tube pin layouts, coil charts and lots of photographs. I haven't seen any plans better done than these!



The "Pentaflex" uses a single 6A7 pentagrid converter tube as a regenerative detector and as an audio amplifier. This could be fun to build.

# 12 SW RECEIVERS from Hammarlund!

You get—

- A Boy Scout's S.W. Receiver
- ARRL Ham Receiver
- The Argonaut
- The AC-DC 2 Tube S.W. Receiver
- Doerle 2-Tube Receiver
- The Dragnet
- The Gainer
- The Pentaflex
- A Power Pack for S.W. Receivers

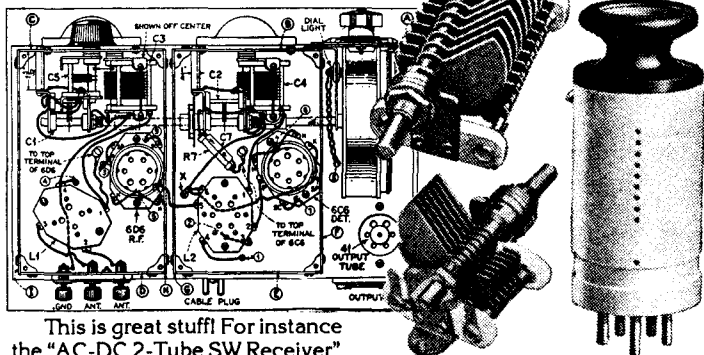
• Radio Amateur's Handbook 3-Tube Band Spread

AC set

- The Ray Five Meter Set
- The Skyscraper
- A Three Tube S.W. Pentode Receiver

And the "Ray Five Meter Set" is a three tube super-regenerative set for the then-experimental band of 5 meters (about 60 MHz). Back then a five meter set was a marvell and there are nine other circuits plus a battery eliminator project.

## Great 1937 Plan Book!

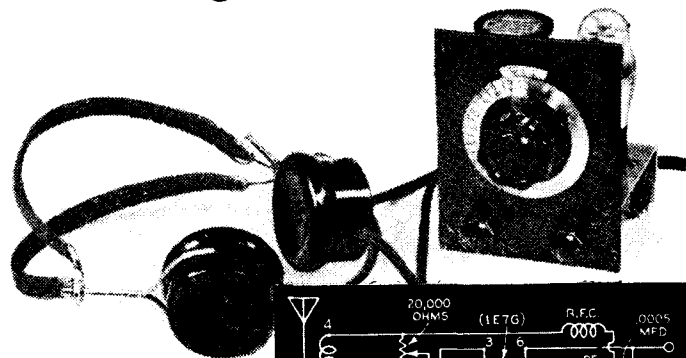


This is great stuff! For instance the "AC-DC 2-Tube SW Receiver" uses two double tubes, a 6F7 as an untuned RF amplifier and a tuned regenerative detector, and a 12A7 as audio amplifier and rectifier. The circuit is surprisingly simple, and yet I'm sure it performs very well!

This is fun reading and a great source of construction ideas. Get a copy of this. The price is reasonable and the content is super. Order a copy today. You'll enjoy it. 5 1/2 x 8 1/2 booklet 32 pages Cat. no. 4937 \$4.95

# Radio for the Millions

Great World War II Era Magazine Articles



**RADIO FOR THE MILLIONS**  
by Popular Science Monthly  
reprinted by Lindsay Publications

From the pages of World War II vintage issues of Popular Science Magazine came this reprint of well illustrated electronics articles on everything from phonographs and shortwave radios to cabinet design and radio servicing.

This is another of those jam-packed project books that are so much fun to read. By careful scrounging and trading you can still get many of the parts and relive the early days of electronics before transistors and integrated circuits.

Every one of the dozens of articles is illustrated with sharp photographs, schematic diagrams, and parts lists. Some of it seems really primitive and amusing. Other projects almost demand that they be built!

Great stuff from the days before miniature vacuum tubes. Endless enjoyable reading, especially if you remember reading this stuff as a kid. Get a copy of this. You'll really like it. 6x9 paperback 192 pages

Cat. no. 20196 \$8.95

## PARTIAL CONTENTS

One-Control Beginner's Radio; Get Started in Radio; Three-Tube TRF Receiver; One-Tube Loudspeaker Set; Four-Tube Speaker Receiver; Four Dollars Builds This Set; More Power for Your Two-Tube Radio; Home-made "Audio" Telegraph; Three-Tube Phonograph Receiver; Four-Tube TRF Receiver; Inexpensive Dual-Turntable Phonograph; Kitchen Radio; Two-Tube Set Gets Foreign Stations; Two-Way Radio Station; Combination Receiver and Amplifier; "Letter" Radio Can Be Mailed; Build an FM Receiver for \$22; A Tuner for Any Broadcast Set; World's Smallest PA Units; Twin-Bed Radio; Floor-Lamp Radio; Practice Code Sender and Receiver; Pocket Receiver for Sports; Tiny Portable

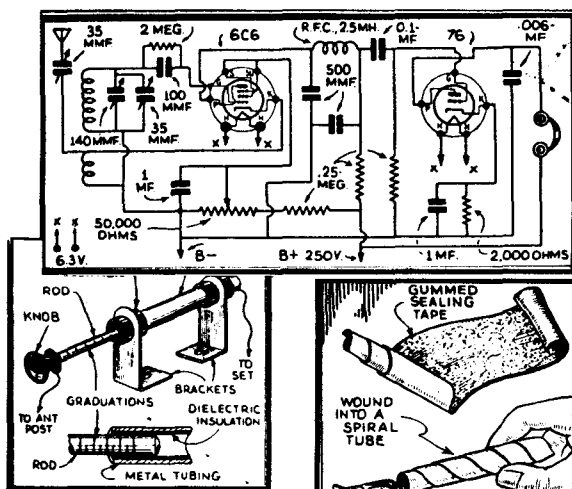
Operates Anywhere; Low-Cost Power Supply; Three-Tube Superhet; Compact All-Wave Set; Two-Tube AC-DC Receiver; Portable Radio-Phonograph; One-Tube Shortwave Set; Sliding Panel Tunes Novel Receiver; All-Wave Bands on Two Tubes; Compact Radio-Tube Tester; Europe on One Tube; Bicycle Radio; "B" Supply for Portables; Priority Receiver Uses New Tuning; Compact Rectifier Unit; Midget Broadcast Set; Week-Enders Radio; Midget AC-DC Receiver; Book-End Radio for Your Den; One-Tube All-Electric Set; Superhet for Beginners; Pocket-Size Radio Tester; "Wireless" Radio Phonograph; Low-Cost Home Recorder; Tom Thumb Radio; Suitcase Phonograph; Two-Tube Portable; and much more!

# Shortwave Quiz Book & Kinks!

# ***Fantastic 1938 Collection of Hints & Tips***

## You Get

- SW Receivers for 110 VAC Operation
- AC-DC Receivers
- Battery Type SW Receivers
- Short-Wave Antennas
- Antenna Hints
- Short-Wave Converters
- Pre-Amplifiers
- Miscellaneous SW Hints
- Beat Oscillators
- Power Supplies
- Audio Amplifiers
- A Folded Doublet to Save Space
- How to Get Best DX
- Simple 1-Tube Booster
- A Twin Pentode Receiver for the Beginner
- Kinks for SW "Fan"
- Easy-to-Build Short Wave Transmitters
- Code Practice Oscillators
- 5-Meter Receivers
- "Ham" Kinks

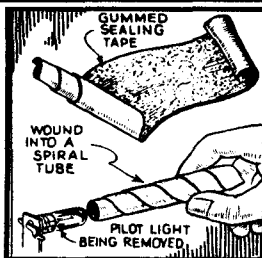


## Short Wave Radio QUIZ BOOK AND KINKS

by Short Wave & Television Magazine  
reprinted by Lindsay Publications

*Short Wave & Television Magazine* frequently published reader's questions and answers as well as small "fillers" of circuits, hints, tips and kinks. In 1938 a collection of these tiny articles was reissued in this 64 page book.

You'll get tips on winding coils, bending chassis, soldering phone tips, making a lightning arrestor from a spark plug, plans for a rf



amplifier, a 2 tube SW set, another for a motorcycle, a 2 tube battery set, a 6.3 volt 3 tuber, and on and on. There are hundreds of hints and kinks here!

You'll wish the stories were longer, but there are so many great ideas (some a little ridiculous) that you won't complain. It's fun reading. I like it, and I think you will, too. Order a copy. 5 1/2 x 8 1/2 paperback 64 pages

Cat. no. 4945	\$4.95
---------------	--------

# 1928 RADIO TROUBLE-SHOOTING

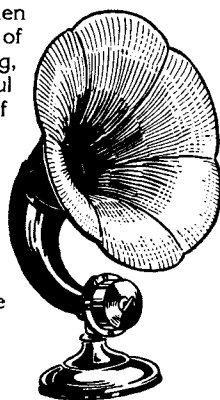
## 1928 RADIO TROUBLE-SHOOTING

by Enno R. Haan

reprinted by Lindsay Publications

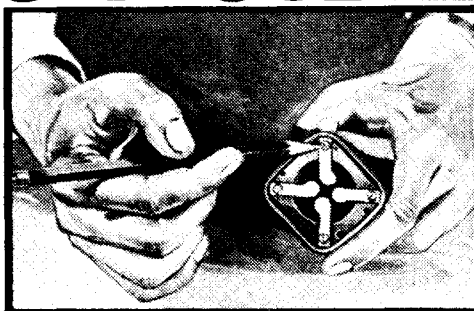
**"A Complete and Practical Work on Radio-Receiver Troubles and How to Cure Them".**

That description might sound somewhat bland, even dull, but this book is anything but that. When you open the covers of *Radio Trouble-Shooting*, you'll discover beautiful illustrations, dozens of schematics, many charts and diagrams detailing radio technology not seen in decades.



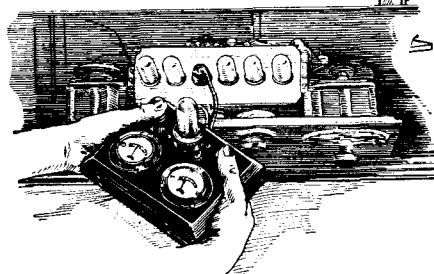
Chapters include tools and instruments, uncontrollable troubles and interference, antenna-circuit troubles, batteries and chargers, battery eliminators and their troubles, tube troubles and their remedies, internal disorders in radio receivers, reproducer troubles and maintenance.

In 1928 radios were generally battery powered, the tube plates usually being connected to several 45 volt B+ batteries, with the family automobile battery powering the tube filaments. It was a real hassle hauling the car battery into the house everytime you wanted to



listen to the radio, and 45 volt B batteries were quite a drain on the wallet. It's not surprising that everyone wanted a battery eliminator that could convert 110 volt AC into radio DC voltages. It's not surprising that numerous pages are devoted to batteries and eliminators, their care and repair.

You'll learn how to erect large

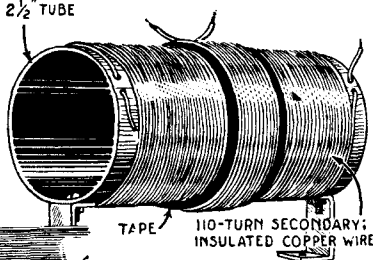


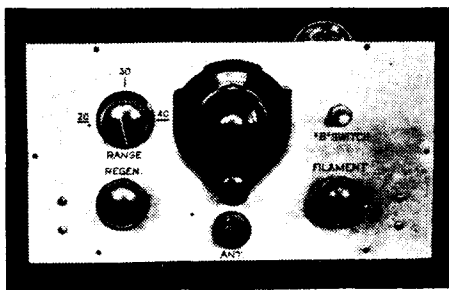
outdoor antennas and connect smaller indoor loop antennas. Discover how to test tubes and reactivate them. And you'll even find an incredible characteristic chart of rarely seen battery and AC tubes such as the Daven MU-6, the Schirkerling MU-20, the DeForest DV-7, the Western Electric 205D and many others.

To cure internal disorders you'll have to know how to troubleshoot the tuning circuit, analyze grid circuit and plate circuit troubles, control regenerative reradiation, how to neutralize a neutrodyne, and even troubleshoot the state-of-the-art superheterodyne.

The chapter on reproducers seems quaint today. You'll learn how to care for headphones, how to eliminate B+ voltages from the loudspeaker circuit, and more. And we're about talking horn speakers and old-time earphones.

This is fun reading with great illustrations throughout. 1928 Radio Trouble-Shooting is more than just a repairman's textbook, it's a snapshot of early radio technology at a time when shortwaves were making radio exciting for everyone. Get in on the fun. Order a copy. This is an excellent early radio book worth having. 5 1/2 x 8 1/2 paperback 328 pages  
Cat. no. 20102 \$14.95





# 1936 Radio Data Book

1936 RADIO DATA BOOK  
by Radio News Magazine  
reprinted by Lindsay Publications

Get the latest radio news by studying the best articles from the 1935 issues of Radio News and Shortwave Radio Magazine.

Learn about the latest developments in television - disk scanning versus cathode ray systems. Learn about a new Canadian television station.



You'll discover the brand new metal octal-base tubes and the receivers that use them such

as the Atwater Kent 649, the GE A-82, and the Super Skyrider. You get plans for shortwave radios: a single tube all-wave set, a 3-band set, and 9-tube amateur receiver, and more.

Amateurs learn how to build transmitters, a 3/4 meter transceiver, and how to use the latest transmitting tubes.

Learn to build broadcast receivers: a universal superhet, a 2-volt DX'er's Super, a Superhet De Luxe, and more.

You also get articles on servicing, on audio amplifiers, on engineering design, and on radio experimenting. And you also get lists of stations broadcasting in the US and world shortwave stations. Every page will well illustrated with photos, schematics, drawings and tables.

This is a fun book for old-time radio buffs. It's useful if you're a builder, and great reading whether you build or not. Another fascinating book for your radio reference library. 8 1/2 x 11 paperback 64 pages

Cat. no. 20218

\$5.95

# DOERLE Receivers & Transmitters

DOERLE CATALOG

originally offered by Oscar Kusterman, NY  
reprinted by Lindsay Publications

Here's a great little catalog from out of the 1930's issued by the New York radio dealer, Oscar B. Kusterman. You get great illustrations and descriptive copy of receivers and ham radio transmitters, along with schematics and practical details.

Examine the Doerle Model D-7 with its 6K7 RF amp feeding a regenerative detector and a powerful AF amplifier. A separate 6J5 acts as a superregenerative detector for 2 1/2, 5, and 10 meters. How well did it work? I don't know. Build one and see. You won't get any how-to, but you do get the complete wiring diagram.

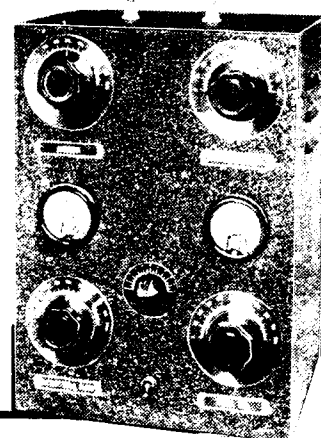
You could buy the 2 tube SW receiver using 37's in a regenerative configuration to pull in local and foreign broadcast stations and bands from 600 to 12 meters. A kit sold for \$2.50 less tubes, or ready to use for only \$4.00.

And there's the 3-tube AC-DC receiver good for 600 to 12 meters. Using the three 76 tubes, this model could run off batteries or 110 VAC, and made a "fine personal set for use with headphones."

You'll find the five tube BS-5 Five Band Bandswitch Receiver, the Doerle Model D-5 cover 1000 to 9 meters, the Doerle "19" single tube receiver kit, the Doerle AC 4, and more.

You could have purchased the HF-19 5-meter transceiver kit, the TR4 5-meter transceptor, a two stage audio amplifier, or a 10 watt modulator. The HF-35 tri-tet transmitter could put out 35 watts on the 160 through 20 meter amateur bands using metal receiving tubes. And you'll find several more transmitters, receivers, and modulators, along with miscellaneous parts needed for construction.

You'll even find one page with circuits "for the fan who builds his own receiver hookups." At the back of the catalog is an order blank, but don't try to use it. I've already notified the New



**Beginner's 2-Tube**

A low-cost 2-tube S-W Receiver for broad band reception of U.S. and foreign stations.

The design of the set is such as to use only those parts which are absolutely essential to proper operation. No extra or fancy parts are used, as they only increase the cost and complicate the wiring in the performance. The receiver may be built for approximately \$2.50. Designed as a kit to accept a selection of parts, this model measures only 4" x 5" x 2 1/2" and has a metal enclosure of its own. Use for that and you want a small portable receiver for use on various ranges of 10 ft.

**BATTERY OR ELECTRIC**

**S-W Receiver**

The Smallest Receiver on the Market

A powerful battery operated model short wave receiver which uses the new 2 volt filament type tubes or 6.3 volt in electric model. Operates entirely from inexpensive batteries. This simple receiver uses two tubes as high-gain regenerative detector and one stage audio frequency amplifier.

Produces unusually good volume on headphones. Will receive foreign as well as American stations with a volume and regularity that will surprise you and your friends.

All parts and factory assembled mount on a heavy black-stained brushed metal cabinet. All holes are drilled and lined. Simple, easy to follow instructions enable even the beginner to obtain excellent results.

Battery set using two type 37's.

Price, complete with tubes and coils for 12 to 600 meters, and ready to use \$4.00  
Double headphones, if desired (extra) 1.50  
In kit form, battery assembled, with coils 12 to 600 meters, but less tubes and untested 2.50  
If tubes are desired, add 1.00  
Available in electric model at same price upon special order.

Note: Specify whether you desire electric or battery operated model.

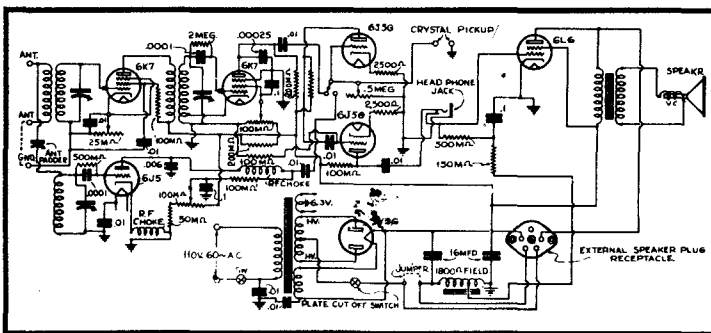
Diagram of 3-tube Beginner's Receiver.

York City postoffice, and if you try to order any of this merchandise,

postal authorities will track you down and have you put away where you belong.

But that doesn't mean you can't browse through this catalog and imagine operating one of these sets. What's more, you can start searching for old parts so that you can build one of these famous little radios.

Get a copy of this. It's well illustrated and fun to read. And it's inexpensive. Order a copy today! 8 1/2 x 11 booklet 24 pages well illustrated  
Cat. no. 20455  
\$6.50





# The Strange Books of Charles Fort

## Four Mysterious Books in One!

The Complete Books of  
CHARLES FORT  
by Charles Fort

Strangel! Very strangel! A must book for anyone who researches unexplained phenomena. The dust jacket explains the book better than I can...

"Did beings from outer space visit earth in the past... are the various objects seen in the sky (flying saucers, in modern terminology) evidences of their visits?"

"What is the explanation of falls of frogs, falls of fishes, falls of seashells, which have been recorded from time to time? Are they explainable in terms of selective tornadoes, or are they evidences of a planetary mechanism that we do not know?"

"How can we answer reports of strange animals, disappearances of men from open sight, curious structures in the snow, talents like teleportation and telekinesis?"

"These are the 'damned,' by which the late Charles Fort meant all the wide range of mysteries that are ignored by orthodox science or explained away improperly."

"Charles Fort worked full time for twenty-seven years at the British Museum and the New York Public Library researching scientific journals, old periodicals, newspapers, and manuscript accounts to gather material on phenomena from the borderlands between science and fantasy. His researches appeared in four books, *The Book of the Damned* [1919], *New Lands* [1923], *Lo!* [1931], and *Wild Talents* [1932]."

"In these four volumes Fort gathered together, organized and commented on a wild host of phenomena: flying saucers seen in the sky before the invention of aircraft, flying wheels, strange noises in the sky; correlations between volcanic activity and atmospheric phenomena; falls of red snow; falls of frogs, fishes, worms, shells, jellies; finding of 'thunderbolts'; discrepancies in the schedules of comets, sightings on Mars and the moon; infra-Mercurian planets; inexplicable footprints in snowfields; flat earth phenomena, disruptions of gravity; poltergeist phenomena; stig-mata; surviving fossil animals; the Jersey devil; Kaspar Hauser;

*Frogs & Fishes Falling from the sky!*

*Flying Saucers in Victorian days!*

*Teleportation!*

*Telekinesis!*

*Mysterious Planets!*

*Unusual gravity!*

*Poltergeists!*

*Living Fossils!*

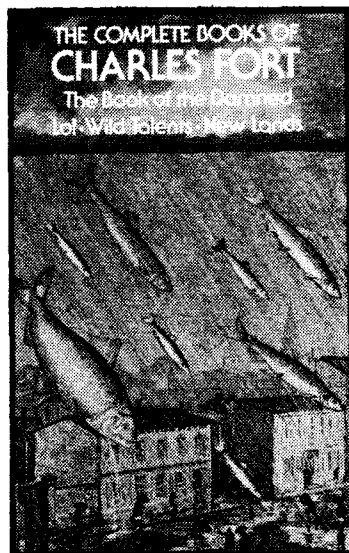
*Much More!*

*Mysteries unexplained by science!*

*27 Years of Research Into old newspapers and journals!*

*Four books reprinted in one hardcover volume!*

*Incredible collection of mysteries!*



spontaneous combustion....

"Charles Fort himself never really explained his phenomena... yet through the years his following has grown...."

In this three-inch-thick hardcover book you'll find more details on more strange, unexplained events than you'll find anywhere else. It's an incredible collection that should be part of any library on *fringe* science. If you specialize in the gray area at the outer edge of science, you *must* have a copy of this. Recommended.

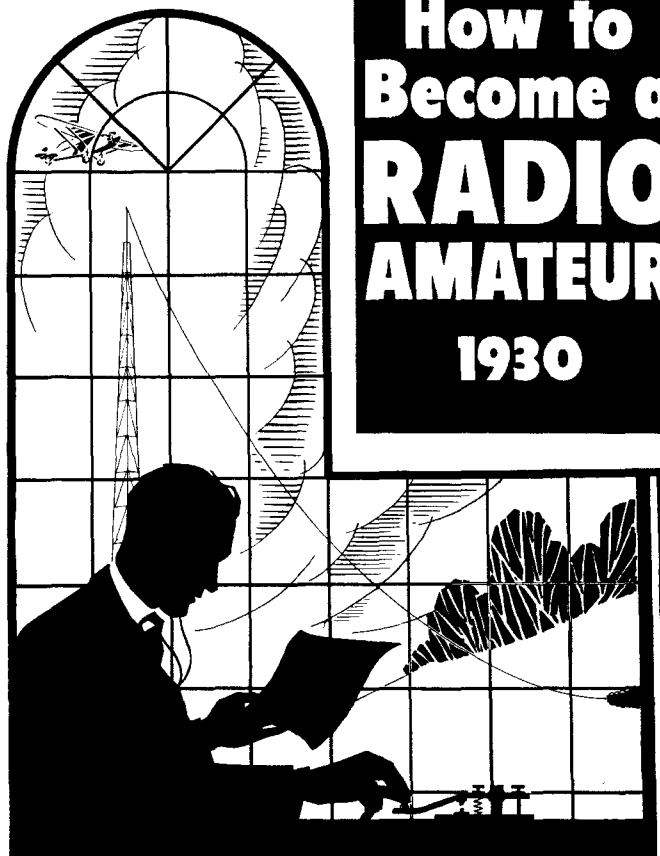
No illustrations, but there is a complete and detailed index.

5 1/2 x 8 1/2 hardcover 1126 pages

Cat. no. 750

\$29.95

## How to Become a RADIO AMATEUR 1930



HOW TO BECOME A RADIO  
AMATEUR (1930)  
by the American Radio  
Relay League

reprinted by Lindsay Publications

In 1930 thousands of people were not only fascinated by the arrival of broadcast radio, but by the magic long distance communication possible through short-waves. This simple booklet was intended to draft many of those people into the hobby of ham radio.

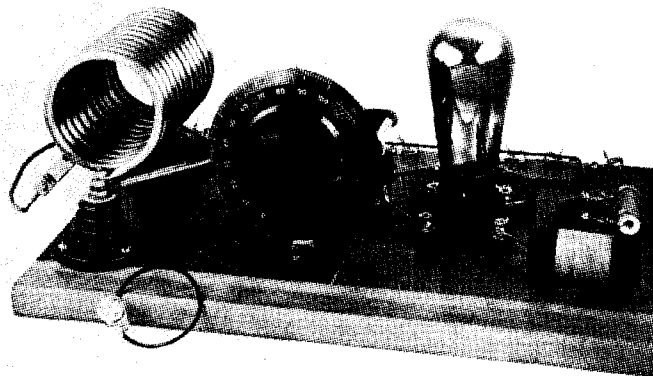
Here you'll discover the amateur bands as they then existed, how to learn Morse code, how to build a two-tube (UV-201-A) bread board regenerative receiver for the 80 meter band, an oscillating transmitter using a UX-210

### Build a 1930 Ham Radio Station!

tube, an AC power supply, tips on setting up the radio station, and finally how to operate it.

Not only is this great nostalgia, it is also quite practical should you want to build a copy of the regenerative receiver. You may want to build a copy of the transmitter for display or occasional demonstration, but you probably wouldn't want to use it on the air.

Discover 1930 ham radio. Build early equipment. Lots of fun reading. Low cost. Get a copy. 8 1/2 x 11 booklet — 32 pages  
Cat. no. 20226 \$2.95



# Experimental Physics

Procedures in  
EXPERIMENTAL PHYSICS  
by John Stong  
reprinted by Lindsay Publications

If you consider yourself an experimenter, an inventor, or a builder of unusual machines and equipment, you must have a copy of this fantastic classic text. No two ways about it.

You'll find wall-to-wall practical how-to and incredible illustrations on almost every one of the more than 600 pages. Chapters include: laboratory glass blowing, laboratory optical work, technique of high vacuum, coating of surfaces by evaporation and sputtering, the use of fused silica, electrometers and electroscopes, geiger counters, vacuum thermopiles and the measurement of radiant energy, optics, photoelectric cells and amplifiers, photography in the lab, heat and high temperature, notes on the materials of research, notes on the construction and design of instruments and apparatus, and molding and casting.

This is some incredible stuff! Learn how to blow glass and make aspirators, distillation condensers, and so on. Learn how to seal copper to glass so that you can imbed electrodes. This could be handy for trying to make light bulbs, vacuum tubes, or x-ray tubes maybe.

Learn how to rough cut lens blanks from large plates of glass and then grind them into lenses on your homebuilt lens grinder. Learn how to make a parabolic telescope mirror using the standard techniques. Learn to make unusual equipment to test the finished mirror. Learn how to grind a Schmidt lens.

To create high vacuum you'll read about roughing pumps, the vapor pressure of waxes, getters for creating the highest vacuums, and learn to make a variety of diffusion pumps using mercury and oil. See charcoal traps, kinetic vacuum systems, vacuum gauges of all types. Remember, all this comes with construction details.

Learn how to silver mirrors with a variety of methods including vacuum sputtering. You'll find extensive details on the evaporation technique for aluminum.

Fused quartz is valuable because unlike glass it can withstand extreme temperature changes without shattering. Learn how to build

**Incredible Laboratory Secrets!**  
**Wall-to-wall Illustrations!**  
**Rare "how-to" information!**  
**Reasonable Price!**

ray and cosmic ray work. Build a Geiger counter. You can build your own Geiger-Mueller tube if you master the high-vacuum technique taught earlier. Unfortunately, most of the electronics described is based on vacuum tubes of fifty years ago rather than on transistors.

Build vacuum thermopiles that measure infrared, visible light and ultra-violet so accurately that they can be used to calibrate photographic lightmeters and such. You've heard of carbon arc lights, but do you know how to build iron arc lights? Or low pressure mercury arc lights? And others? You can even build a machine to measure the wavelength of colored light.

You'll find details on hydrogen furnaces, crucibles, burners, electric arc furnaces, and even a lab setup for making artificial rubies and sapphires! And there's much more - even down to what we consider the "easy stuff" like using a lathe and sand casting.

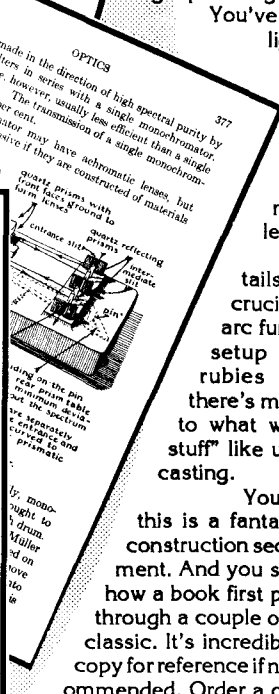
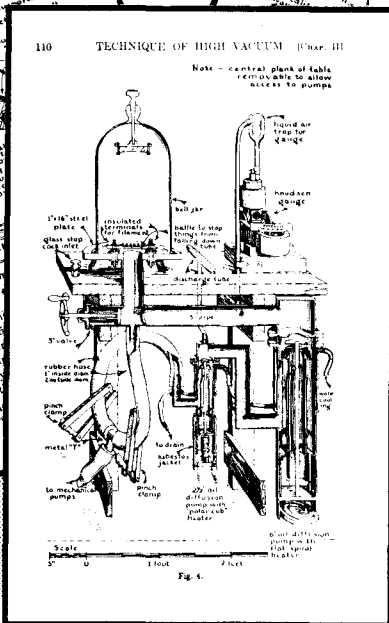
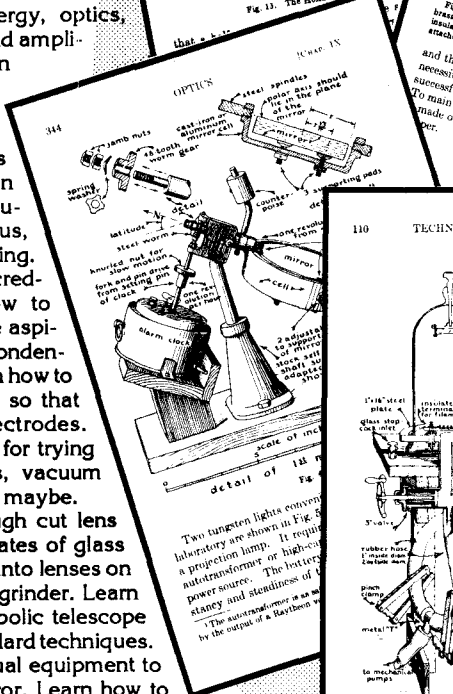
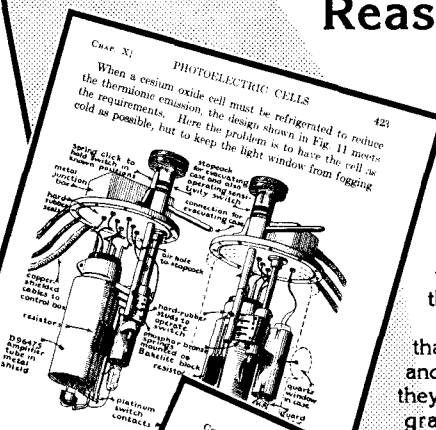
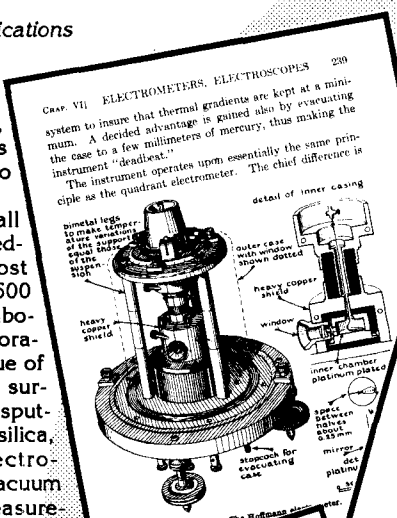
You should see by now that this is a fantastic book loaded with construction secrets for unusual equipment. And you should now understand how a book first published in 1938 went through a couple of dozen printings! It's a classic. It's incredible. You should have a copy for reference if nothing else. Highly recommended. Order a copy today.

5 1/2 x 8 1/2 sewn paperback 642 pages  
Cat. no.4562 \$23.95

## SOMETHING YOU SHOULD KNOW

This is no ordinary paperback book. "Experimental Physics" is printed on acid-free paper and is sewn like a hardcover book to prevent pages from falling out.

According to pricing formulas, it should sell for much more. If a book like this were released today by a certain major book publisher whose books I've carried from time to time, they would charge from \$45 to \$65 a copy. Maybe even more. At \$23.95 it's a steal. Get a copy.



micromanipulators and all the rest of the equipment to produce tiny fibers that can be used for suspending the elements of an electrometer, for cross hairs in optical instruments, or for building a balance. The microbalance shown is supposed to be sensitive down to a billionth of a gram per division!

And there's so much more! Build a Compton adjustable quadrant electrometer, a Hoffman electrometer, and others useful for x-

# Electrical Instrument Making for Amateurs

*Build Unusual  
Electrical Equipment  
from 1888!*

## ELECTRICAL INSTRUMENT-MAKING

for Amateurs

by S. R. Bottone

reprinted by Lindsay Publications Inc

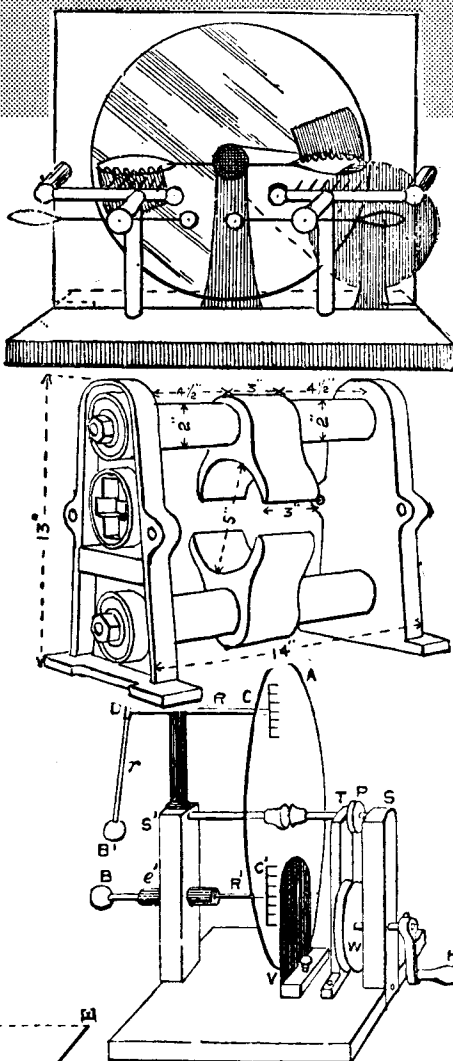
The words "electrical instruments" bring to mind test equipment: meters, signal generators, and oscilloscopes. But back in 1888 when this volume first hit the bookstores, electrical instruments could be anything from simple Leyden Jar capacitors and static electricity machines to dynamos and telephones, as well as ammeters, voltmeter and galvanometers.

With this as your guide you can go back a hundred years and imagine what it must have been like to be experimenting right at the cutting edge of technology. You can build your own batteries from scratch, use them to run a shocking coil while you monitor the current draw with homemade meters!

You get basic information on materials, soldering, and working glass. Then you build pith ball and gold leaf electroscopes, a Coulomb torsion balance, and Volta's electrophorus static generator. You'll learn how to take a sheet of glass and cut a circle from it, drill a hole in the center and use it to build Bertsch's high-voltage static generator, Carre's Dielectric machine, a Holtz machine, and a Wimshurst influence machine. Any one of these machines is powerful enough to shock the underwear off Aunt Annabelle! And you get info on building a Leyden Jar, Franklin plates, and a microFarad condenser.

Next come the devices that use current electricity. You'll learn how to build a medical coil that produces a 1/2" spark, or if you care to make a simple modification you can get 1" spark, in which case the machine is called an induction coil. With a powerful magnet you can make a shocking machine which appears to be little more than a simple magneto. Then you build a uni-direction current machine (a motor), a dynamo, an ammeter, a voltmeter, a galvanometer, and a thermopile that produces electricity directly from heat.

You'll be shown how to build batteries, a single fluid cell, a double fluid cell, and using these two basic configurations how to create powerful batteries using chemicals from zinc chloride and sulphuric acid to sal ammoniac and potassium dichromate which are more commonly known as the Daniell, Bunsen, Smee, Walker cells and others.



Then you get simple plans so that you can build a working electrical telephone, the newest rage a hundred years ago. And finally you get a couple of appendices that add additional information on galvanometers and batteries.

Obviously so many topics are covered in such a small book that

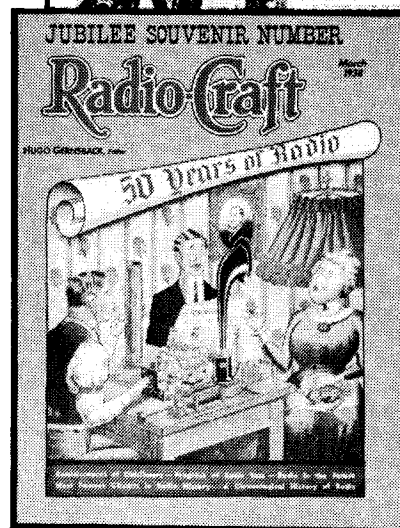
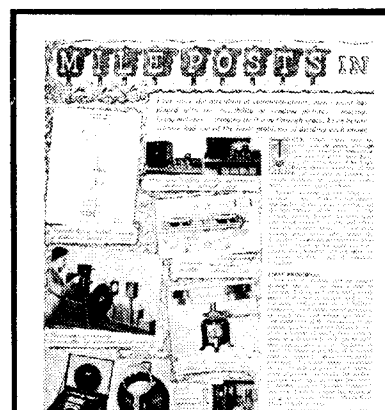
the number pages devoted to each topic are necessarily limited. Any one topic could really be expanded into a book of its own. But even so, you get enough useful information to build working equipment. The illustrations are primitive by today's standards, but are very informative nonetheless.

This is a fascinating book you're sure to enjoy. Lot's of valuable information at a price far below what you would have to pay for a now-rare original copy. With this book you can go back and rediscover the world of electricity. Get a copy. You'll really like it. 5x7 paperback 183 pages

Cat. no. 4929

\$9.95

# Amazing "Radio Craft" Magazine from 1938



## RADIO CRAFT MAGAZINE

March 1938

edited by Hugo Gernsback

Radio got its start in the 1920's, but it wasn't until the 30's that it made it to the big time. By the late 30's "Radio-Craft" was one of many magazines entertaining and educating radio builders and enthusiasts.

In March 1938 the magazine published a special heavily illustrated edition on radio's first 50 years. And now you can have a complete reprint of that dynamite issue.

Articles include progress of radio receivers, reminiscences of old-timers, story of amateur radio, radio parts of yesteryear, mileposts in television, Fleming's valve, old-time radio stations, new tubes for '37-'38, super-regeneration in 1922, when the neutrodyne made its bow, early tube experiments and much, much more.

You get every fascinating article, advertisement and how-to construction tip. Great reading for anyone with even a slight interest in oldtime radio. Excellent book. Fun reading. Order a copy! 8 1/2 x 11 paperback 144 pp. Cat. no. 353 \$14.95

# NEON SIGNS

# Build a SOLAR CELL that really works!



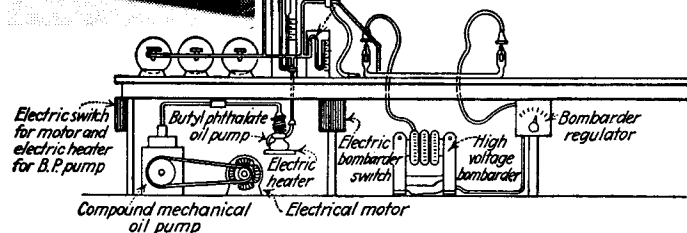
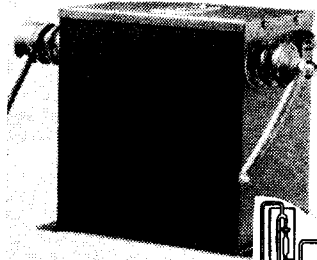
## NEON SIGNS

by Miller & Fink  
reprinted by Lindsay Publications

Sure. Equipment, techniques, and sign design have changed since this book first appeared in 1935, but not all that much.

Even if you're not interested in making neon signs, you'll find loads of useful information on rare gases, glass blowing, and vacuum systems that could be useful in experimental physics, high voltage, or even in building your own experimental vacuum tubes!

Chapters include the luminous tube, materials, electrical equipment, types of signs, designing the sign, glass bending, pumping systems, bombarding, filling, testing, aging, installation equipment, special applications, tricks of the trade and more!



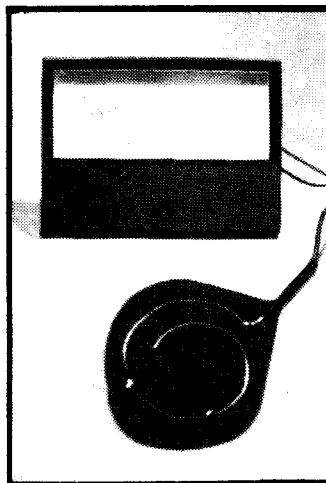
## Great How-To on Glass Blowing, Vacuum Systems, High Voltage and more from 1935!



This is a quality straight-to-the-point book loaded with diagrams and photographs that you won't find just anywhere. It might be fun to make bizarre neon signs, repair "antique" signs, or just get into the trade. But even if that's not your goal, you'll find loads of unusual, interesting information. Consider this carefully. It certainly is NOT run of the mill. Order a copy. 5 1/2 x 8 1/2 paperback 288 pages

Cat. no. 20340

\$12.95



## How to Build a SOLAR CELL That Really Works by Walt Noon

Yes! You CAN build a solar cell that converts sunshine into electricity. And it's really quite easy.

Modern high efficiency solar cells based on silicon crystals are difficult and dangerous to manufacture. You would need exceptionally expensive equipment just to perform the most basic experiments. But fortunately there is another method.

Walt Noon will show you how to quickly and inexpensively build a copper oxide photo cell. Admittedly its overall efficiency doesn't come close to modern silicon cells, but neither does the cost. You can crank out cells for pennies. Connect many cells in parallel and series, and you can generate surprising amounts of power.

The process requires only simple tools. The chemicals, like all chemicals, can be dangerous if mis-handled, but the worst is probably nitric acid which is used to thoroughly clean the copper.

He'll show you to make a

working cell, test it, troubleshoot it if necessary, and even give you ideas on an experimental painted cell that he's working on. In addition, he'll give you schematics of test circuits, sample applications, and interesting projects that he's tried. You'll also get names and addresses of suppliers.

That author is not a professional, but he has safely built and used these solar cells, and he's willing to show you how its done. You get a 24 page booklet with many drawings, schematics and photographs that describes the relatively simple process in detail.

Build solar cells! Perhaps you can make some improvement in the process that will improve efficiency. Build electronic equipment. Charge batteries. Build a great science fair project. No matter what your objective, you'll find this to be a fascinating project worth trying. Rare information! Order a copy of this inexpensive booklet today. 5 1/2 x 8 1/2 booklet 22 page

Cat. no. 819

\$4.95

**Solar Power**

**New!**

flies available for 1 feet across. Indirect enough heat to cook a meal or solder metal!

**A Painted Cell**

One of the most amazing and interesting applications of simple cuprous oxide solar cell is a cell made by actually painting cuprous oxide onto a metal surface.

Cuprous oxide may be purchased inexpensively in powdered form from many chemical supply houses including those mentioned in the text. When mixed with a clear resin and painted thinly on a metal surface it will take on many of the properties of a cell made by the heating process described earlier.

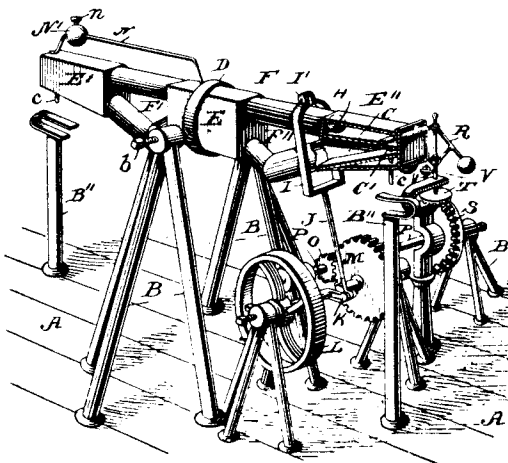
So far the cells I've produced using this method have generated only very small amounts of power. Perhaps better mixing and techniques could make this the fastest, lowest cost cell to fabricate. What would be lost in efficiency could be made up in greater surface area.

**Final Notes and a Simple Cell**

I don't know if the construction of a photoelectric cell such as those described in this article is worthwhile versus purchasing commercial cells when you take into consideration their low efficiency and the time it takes to construct them. But I do know



# FIFTY Perpetual Motion Mechanisms

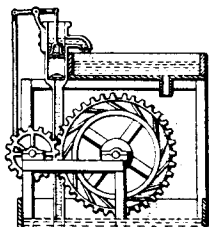
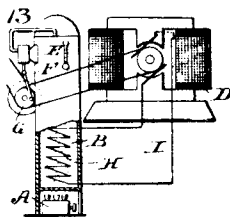


## FIFTY PERPETUAL MOTION MECHANISMS

by Fred Dieterich  
reprinted by Lindsay Publications

The author was a patent attorney at the turn of the century. I suppose that so many people considered themselves inventors and presented him with so many headaches that he wrote a book entitled "The Inventors Universal Educator" covering the process of securing a patent. It sold for many years starting 1899.

One short section of his book covers perpetual motion inventions which are unpatentable. Dieterich, who was outraged by claims of



perpetual motion, presents drawings of 50 different mechanisms. No doubt, you've already seen a number of these, but others are unique, and all are interesting.

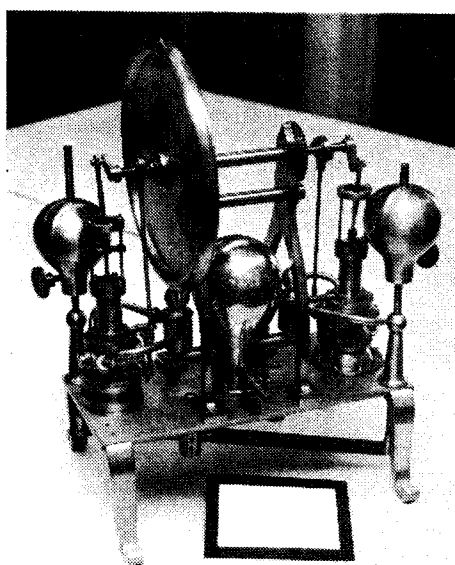
You'll see the Marquis of Worcester wheel, the Horace

Wickham machine, the 1868 device of Dr. Drasch of Austria, an electric device, the self-moving railway, the Orfyreus 1720 wheel, a complicated water screw, and others.

If you're into PM, you'll want to add this to your collection. Maybe you're trying to build a machine and want to avoid previous failures. Or you're a skeptic and want a good laugh. Whatever, the material is interesting and the price is low. Get a copy. You'll like it. 8 1/2 x 5 1/2 booklet 22 pages

Cat. no. 898

\$3.75



# PERPETUAL MOTION HISTORY

## PERPETUAL MOTION

The History of an Obsession  
by Arthur Ord-Hume

People for centuries have attempted to build a machine that will produce more energy than it consumes. And they've all failed.

If you think you've invented a new type of perpetual motion machine, you had better read this book. Chances are, it has already been attempted.

For the rest of us, this book is interesting reading. There are some machines, that don't actually produce energy, but they run seemingly forever on a small amount of energy, like Singer's perpetual chime that was set up in 1840 and is still operating!

Learn about medieval machines, self-moving wheels, lodestones, electromagnetism, steam, capillary attraction, spingewheels, Cox's machine, the Redheffer device, the Keely motor, odd ideas about vaporization and liquification, the barring of

perpetual motion devices form the patent office (although the magnet motor sneaked in), rolling ball clocks, and more. You get lots of illustrations, and an excellent list of references for further reading.

Interesting book! Well written and researched. Excellently done. If nothing else, put one in your reference library. It's not all that expensive. 5 1/2 x 8 1/2 paperback 235 pages.

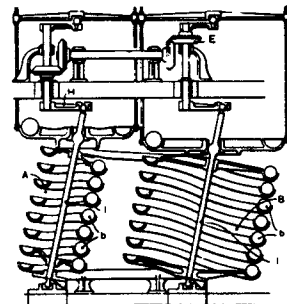
Cat. no. 510

\$6.95

# PERPETUAL MOTION MYSTERY

## THE PERPETUAL MOTION MYSTERY

by R. A. Ford  
Perpetual motion. Some people laugh at it. Others take it very seriously. Here's a serious look at these unusual systems.



First, you get a reprint of the small and now-rare "Perpetual Motion Handbook Through Entropy Reversal" published in 1967 by I. R. Barrows. Then, you get his first (and last) four "Perpetual Motion Journals" published about the same time. Each is small but filled with letters patents, ideas, illustrations, and thought-provoking suggestions.

The author jumps into a discussion of why perpetual motion might be possible, pointing out unusual theories from the past, and pointing out possible defects in current theories.

Covered are kinetic gravitational theories of the 18th century, DesCarte's Vortex Theory, LeSage's Impact Theory of Gravity, and Brush's Wave Theory. Attempts at experimental confirmation of these theories are then provided.

Natural gravitational anomalies such as solar eclipse, bulging river surfaces, bore at sea, unusual rock movements, slowly falling hail are revealed. You'll learn about Robert Cook's inertial propulsion device and its relation to Newton's Law.

The last large section covers the Orfyreus wheel built in Germany centuries ago. The author believes it might have been the only real perpetual motion machine yet invented, the secret of which was lost. You'll learn about the inventor's life, his education, his wheels, his successes and failures, the tests, and more.

Last, the author, based on the material presented in earlier chapters suggests how a perpetual motion machine might be built.

You get a collection of strange, rarely seen stories and phenomena that might hold the key to perpetual motion, if, indeed, such a machine can be built.

This is not a construction manual, nor is it extremely complex. It's a notebook gathered over the years, one that should be interesting to believers and non-believers.

Consider it. You won't find anything quite like it on the market. Different. Unusual. Interesting reading. Get a copy.

5 1/2 x 8 1/2 paperback 196 pages

Cat. no. 4538

\$9.95

# EXPERIMENTAL SCIENCE!

## EXPERIMENTAL SCIENCE

by George M. Hopkins

Fantastic! There is no other way to describe this incredibly illustrated two-volume set from 1906. It is certainly worth having.

Starting about 1889 "Scientific American" Magazine published a regular column by George Hopkins showing readers how they could build experimental equipment and test their own versions of new inventions such as the electric light, telephone, and phonograph. Hopkins' columns were routinely reprinted in books, and this 25th edition from 1906 had to be split into two volumes. And what a pair of volumes they are!

You'll find some of the most fantastic wood engravings ever, illustrating experimental equipment of all types.

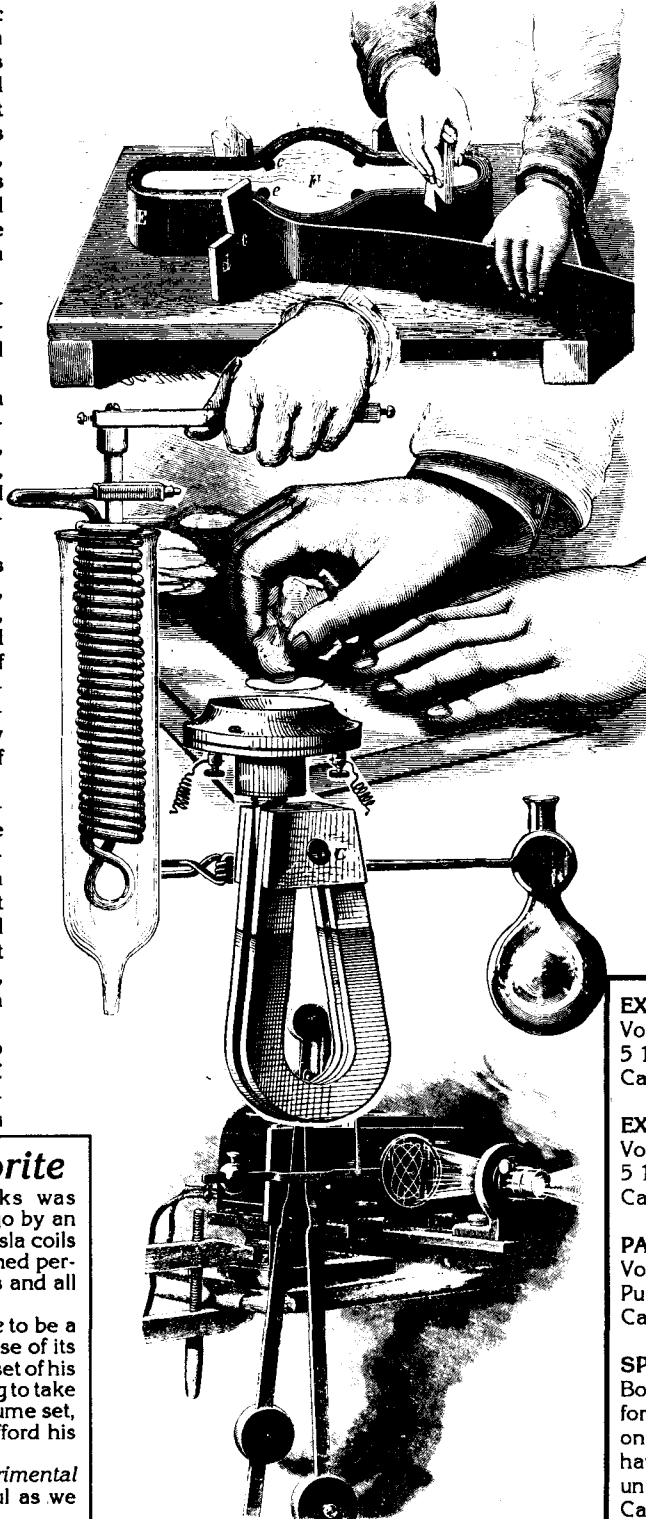
Volume One consists of nineteen chapters on rest, motion, force, gyroscopes, liquids, gases, sound, heat, light, polarized light, microscopy, photography, magnetism, frictional (static) electricity, dynamic electricity.

Build a gyroscope, Foucault's pendulum, a simple hydraulic press, a hydraulic ram, simple air pump, Geissler tube, a recorder for sound vibrations, device for production of sounding waves, a simple phonograph, centrifugal siren, and Norremberg Doubler. And these are just a few of the projects in only the first half of the first volume!

You can build a simple microscope and accessories, or a simple camera with plate holder, make Daguerreotype photos like those from the 1840's (dangerous), experiment with magnets, static electricity, build all kinds of batteries, a device that converts heat directly into electricity, build bells, electromagnets, and even a 1/4 hp electric motor.

Volume Two will take you into more electricity by investigating AC electricity, arc lamps, high voltage induction coils, and much more. You

**Over 1,000 Pages! • Incredible Machines! • Forgotten Experiments! • Incredible Illustrations!**



can build a telephone. Build a magic lantern and perform a variety of interesting projections.

You'll get practical how-to on blowing glass, making lenses, etching glass, making test tube racks and the like, making and using a crucible furnace, sand casting, making carbon rods and plates, and more.

You'll be shown how to perform a variety of scientific parlor tricks. Discover scientific uses for the phonograph, build an opaque projector, and a simple acetylene gas generator. Try experiments with super cold liquid air, or new advances in photography including color photography, divining rods and metal detectors, long distance telephony, new wireless telegraphy, building an electric clock, high voltage experiments, even poly phase electricity!

If you haven't guessed by now, this is both an introduction to physics and simple directions for building strange equipment.

The how-to you get is not overly detailed. You're expected to have some mechanical ability. You *WILL* get excellent illustrations that will show you almost everything you need to know. Any additional secrets are pointed out in the text.

If you want to build and run scientific equipment that hasn't even been seen in decades, you should have this. Kids can build a unique science fair project. Old book lovers will treasure this. And if you love machines, you will get hours and hours of enjoyable reading.

It's impossible to reveal the scope and beauty of these two books in the limited space this catalog provides. But take my word for it, these are fascinating books. Top quality. Expensive, but worth the price. Look them over carefully.

## EXPERIMENTAL SCIENCE

Volume One

5 1/2 x 8 1/2 paperback 560 pages

Cat. no. 4490 \$19.95

## EXPERIMENTAL SCIENCE

Volume Two

5 1/2 x 8 1/2 paperback 532 pages

Cat. no. 4503 \$19.95

## PACKAGE - Paperback

Volumes One & Two

Purchased separately: \$39.90

Cat. no. 926 \$34.95

## SPECIAL HARDCOVER OFFER

Both volumes in sewn hardcover bindings for libraries and collectors. Available in sets only. Relatively few hardcover volumes have been printed. Availability may be unpredictable.

Cat. no. 927 \$48.95

## Researcher's Favorite

The existence of these books was pointed out to me several years ago by an avid experimenter who has built Tesla coils and Wimshurst machines, researched perpetual motion, free energy devices and all types of unorthodox subjects.

He found *Experimental Science* to be a very valuable reference, but because of its rarity, he hadn't been able to buy a set of his own. When I told him that I was going to take a chance on reprinting the two volume set, he jumped for joy. Now he can afford his own set. So can you.

We're confident you'll find *Experimental Science* as much fun and as useful as we have.

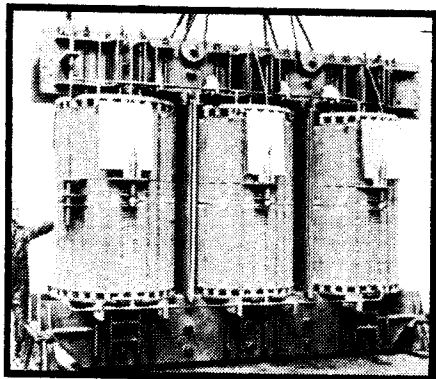
# Introduction to MAGNETISM

Not too  
simple

Not too  
complex

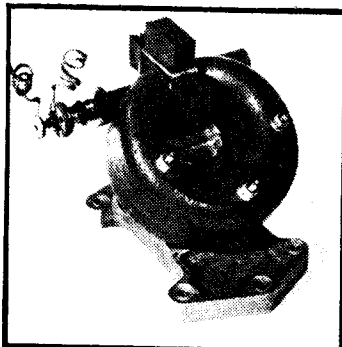
Just  
right!

MAGNETISM — An  
Introductory Survey  
by E. W. Lee



The back cover of this book explains it all very well...

"The lodestone was known to the ancient Greeks; the Chinese knew of the compass a thousand years ago; in the 16th century Gilbert described magnetic poles. Professor Lee takes us through the early experiments to the first modern accomplishments of Oersted,



Ampere and Faraday. We then learn the principles behind electric

motors, dynamos, transformers, permanent magnets, synchrotrons, solenoids, memory banks in computers, betatrons, magnetic supercooling, and other modern applications...

"The author shows us how magnetism 'works,' with reference to such concepts and principles as lines of force; ferromagnetism; the atomic theory of matter in relation to electromagnetic properties; paramagnetism and diamagnetism; quantitative measurement of magnetic force; domains and

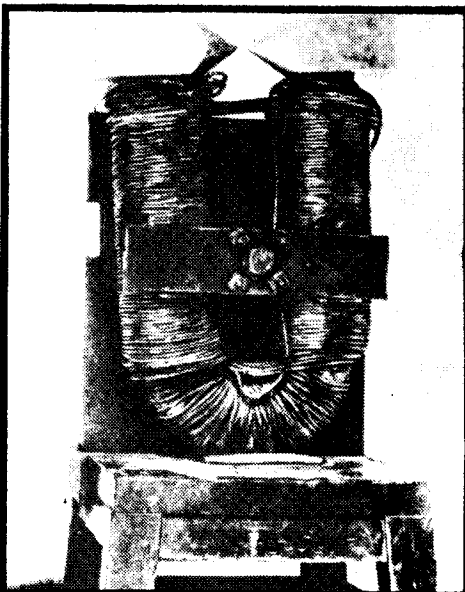
domain boundaries; high-permeability alloys, their theoretical basis and uses; magnetic matrices used as computer-age storage devices; ferromagnetism and antiferromagnetism; the use of magnetism in modern scientific research; and problems of the earth's magnetism, including its meaning to Wegener theory of continental drift and solar phenomena."

You get 60 diagrams and sketches and more than 32 pages of photographs. If you want to explore the theory, you can study the mathematics that explains magnetism.

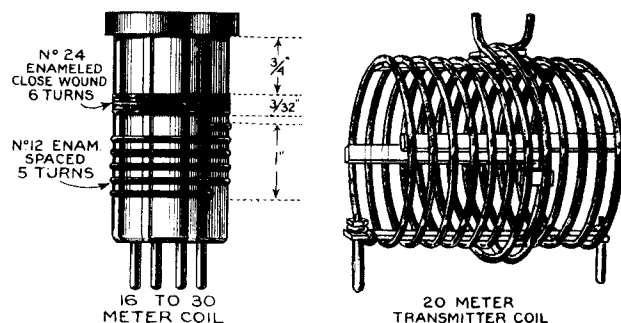
This is one heck of a lot of book for the money. And it's must reading for basement engineers, experimenters, even the guy who's trying to build a magnetic motor or perpetual motion machine. Great background information. Order a copy. 5 1/2 x 8 1/2 paperback 281 pages

Cat. no. 365

\$6.95



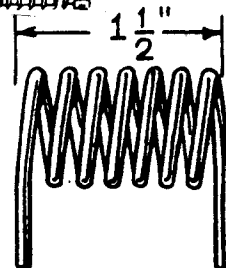
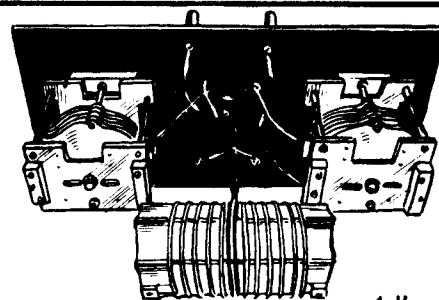
# SHORT WAVE COIL DATA BOOK



## SHORTWAVE COIL DATA BOOK by Radio Publications

Coils! Coils! Coils! They're the heart and soul of shortwave radio receivers and transmitters. A properly wound low-loss coil can make the difference between having an average piece of gear or a hot performer. And it seems the simpler the receiver, the more important the coils.

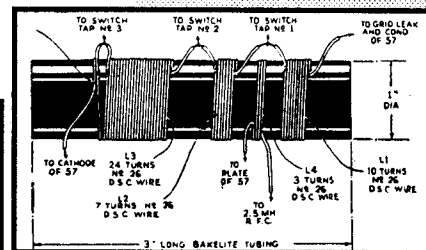
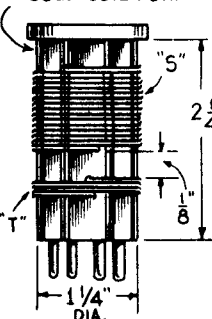
Here in one jam-packed booklet from 1937 are hints, tips, charts to help the shortwave radio builder design and build the best coils possible. You get informative articles from Gemsback magazines such as



- Coil Data for TRF Receivers
- The One Tube Oscillodyne Coils
- The Mono-Coil
- 2 Winding Coils for 10-500 Meters
- Coils for a 3 Tube Band Spreader
- and many others

You also get nine different circuit diagrams for the "Most Popular SW

## RIBBED COIL FORM



Tuning Circuits" and five "Transmitting Circuits employing the coils described".

This is highly specialized information on just one important topic essential to successful radio construction. It's only 16 pages but it's quite inexpensive and delivers. Get a copy! 8 1/2 x 11 booklet 16 pages

Cat. no. 830

\$1.95

## ALTERNATOR SECRETS

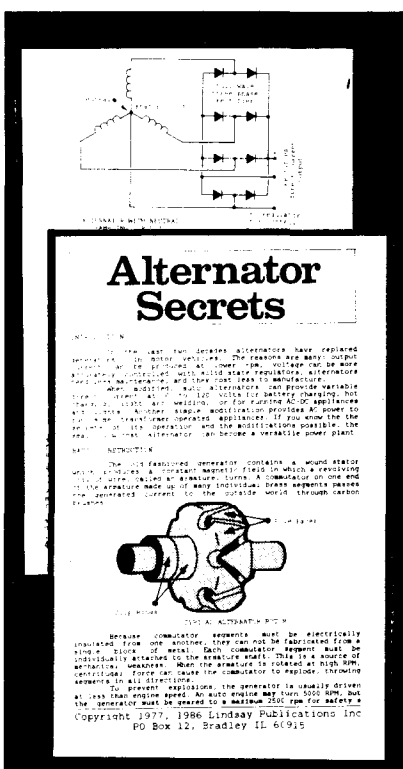
If you know the secrets of modification, you can get large amounts of power from a common auto alternator. You can build a portable powerplant driven by a gasoline engine to run brush-type power tools, lights, and AC-DC appliances at remote locations. You can hot-charge storage batteries, or even do light arc welding. Operation of the regulator is explained so that you can build a custom regulator, if needed, to provide regulated output voltages other than 12.

Learn how you can make almost an ordinary induction motor (like an old washing machine motor) put out 120 volts at 60 cycles without rewinding or internal rewiring. These secrets are worth the price of the booklet alone.

We've jammed a ton of information into 16 pages with small type to keep printing costs down so that we can keep the retail price the same as the old edition. Valuable, rare info! Get a copy. 5 1/2 x 8 1/2 booklet 16 pages

Cat. No. 80 \$3.00

## Power from Alternators!



# PRIMARY BATTERIES New!

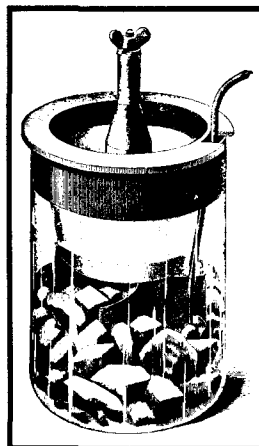
## PRIMARY BATTERIES

by Henry S. Carhart

reprinted by Lindsay Publications

Great! You've built a radio, a Tesla coil, or some other piece of electrical gear. How are you going to power it? Sure, you can buy batteries, or plug it into the wall, but wouldn't it be more authentic, more impressive if it were powered by a bank of batteries that you built as well?

You can find instructions about cell construction, but they tell you little else. Here's a great little book that covers the characteristics, construction, performance, maintenance, and measurements of primary batteries, that is, batteries that

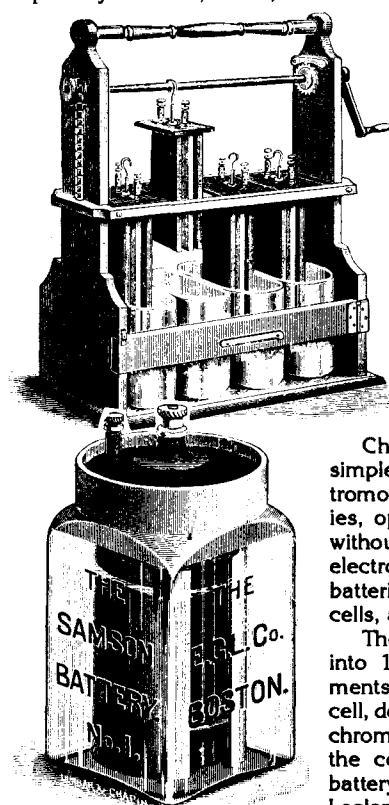


turn chemicals into electricity.

This is not really how-to. You won't be given dimensions, parts lists, nor detailed formulae. In many instances you may get enough information to build a successful cell. What you do get is what I call "practical theory" - knowledge that will help you understand turn-of-the-century batteries and get the most from them.

Chapters include introduction, simple voltaic cell, potential and electromotive force, closed circuit batteries, open circuit batteries, batteries without a depolarizer, standards of electromotive force, miscellaneous batteries, battery tests, grouping of cells, and thermal relations.

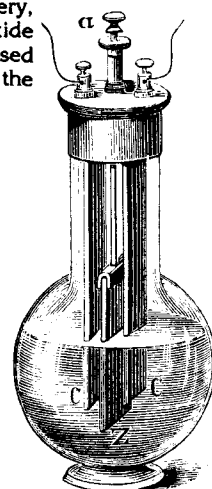
The chapters are actually broken into 118 sections such as experiments on the polarization of a simple cell, defects of the Daniell cell, the bi-chromate battery, the copper-oxide battery, the closed Leclanche cell, the



Smee cell, the Law battery, the Gassner dry battery, Lord Rayleigh's form of the Clark element, Minchin's seleno-aluminum cell, Jablockhoff's battery, test of a silver chloride cell, grouping dissimilar cells, application of the Bunsen cell, and much more.

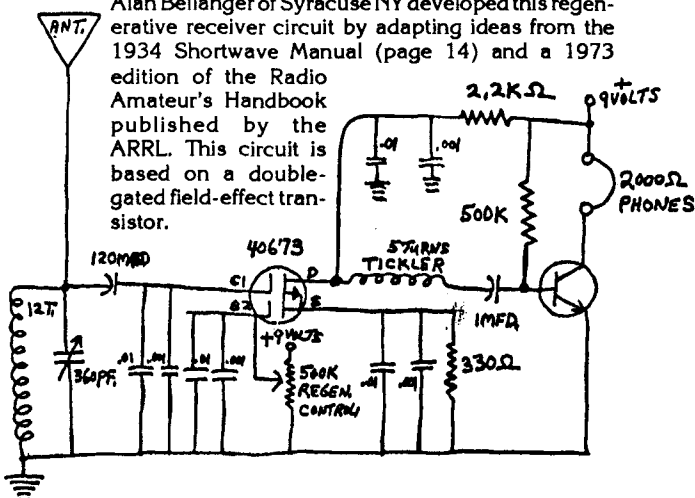
Again, this is not a construction text. Once you read this book though, you can decide what type of battery to build and go from there. Why waste your time and money building a battery that won't do the job? Know what you are up against before you start.

Excellent book. Great illustrations. Easy-to-read text. Understandable theory. Worth having. Order a copy! 5x7 paperback 208 pages Cat. no. 20536 \$8.95



## Reader's Circuit!

Alan Bellanger of Syracuse NY developed this regenerative receiver circuit by adapting ideas from the 1934 Shortwave Manual (page 14) and a 1973 edition of the Radio Amateur's Handbook published by the ARRL. This circuit is based on a double-gated field-effect transistor.



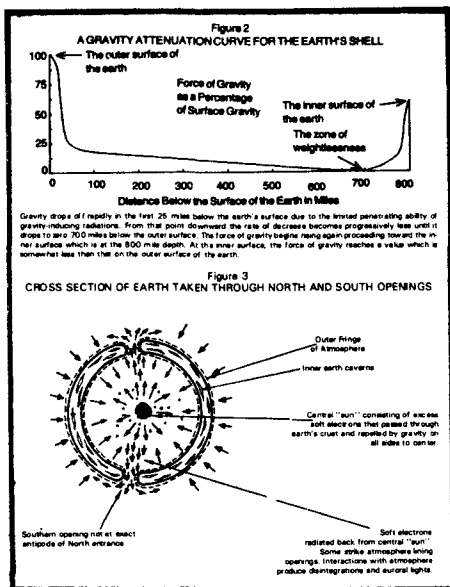
## Looking for Keely Book

Is Keely and His Discoveries from 1893 by Clara Bloomfield Moore worth reprinting? If you think so, let me know. I haven't seen it. If you have a copy, consider loaning it to me for reprinting. I'll make it worth your while. Thanks!

*Lindsay*



# Strange New Explanation of the Universe!



## THE AWESOME LIFE FORCE

by Joseph H. Cater

The author is one of those people who claims that the government, the pentagon, NASA, the science community and others are suppressing knowledge and telling us lies, and that he alone has solved all of the mysteries. Although I find that hard to believe, some of his arguments are interesting.

Chapters include: undeniable discrepancies in conventional science, cause of tides, the hollow condition of the earth, closer look at the properties of light, popular misconceptions of atomic and particle physics, practical free energy devices, the Searl effect and related UFO phenomenema, research of Von Reichenback, pyramid of life, resolving the mystery of teleportation, materializations from higher realms, origin and transference of disease, and much more.

The author claims that there are holes at the north and south pole that go to the center of the earth. They've been seen and photographed by astronauts but are suppressed by NASA because they can't be explained.

If you believe in this sort of thing, you'll love this book. If you're trained in the sciences, you'll find many of his arguments border on the ridiculous. But regardless of what side of the fence you're on, you WILL find this interesting reading. It's as far out as any book I've seen yet. 5 1/2 x 8 1/2 paperback 475 + pages

Cat.no. 679

\$14.95

# Early FAX & TV Equipment!

## VISION BY RADIO

Radio Photographs, Radio Photographs

by C. Francis Jenkins

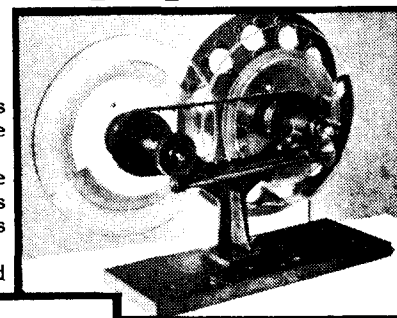
Go back to 1925 and discover the latest devices developed to transmit photographs, in other words, the earliest fax machines and the earliest televisions!

This is an amazing book! You get details on the electrical components that existed at the time, the tests that had been tried, correspondence from famous people, and historical notes.

The most interesting section, I think, is illustrated

review of existing machines: Nipkow & Sutton, the Amstutz system, the Electrograph, the Baker machine, the Dr. Korn Machine, the Rignoux and Fournier Scheme, the Belin machine, the AT&T machine, RCA's machine, the Braun Tube receiver, pictures by radio in natural colors (!), prismatic disc machines, the Jenkins prismatic ring, Jenkins synchronizing forks, Jenkins picture-strip machine, Jenkins Duplex machine, talking machine photographs, radio vision (television), Jenkins high speed camera, and more.

Obviously, this book was written and pub-



## 1925 Television

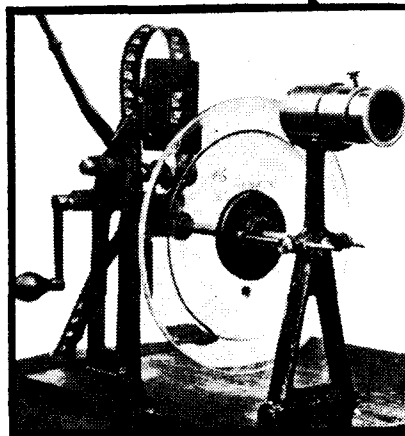
lished to glorify Jenkins and Jenkins Laboratories Inc (no doubt so he could make more money). But it delivers more photos, drawings, and patents on early fax and TV equipment than I've ever seen anywhere before.

It's really good, and the price we ask is a mere fraction of what you'd pay for

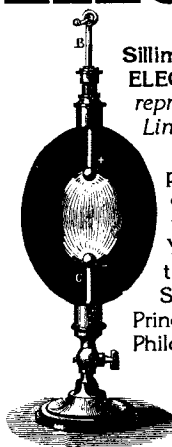
an original if you could find one. Rare information! Excellent book. Get a copy! 5 1/2 x 8 1/2 paperback 140 pages

Cat. no. 20200

\$9.95



# Silliman's ELECTRICAL MACHINES



## Silliman's ELECTRICAL MACHINES

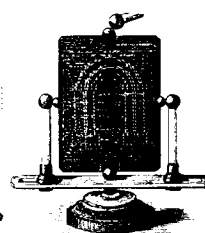
reprinted by  
Lindsay Publications

If you'd like to build a powerful lightning bolt generator, this a publication you should study for ideas. You get beautifully illustrated pages from Benjamin Silliman's book entitled Principles of Physics or Natural Philosophy published in 1865.

Learn about electrophorus, the cylinder electrical machine, Ramsden's plate machine, the American plate machine,

Ritchie's double plate machine, the Tylerian machine, care & management of machines, electricity from steam, and other sources of electrical excitement. Discover seven simple but entertaining experiments. Then investigate equipment to store electricity such as the Aepinus condenser, Volta's condensing electroscope, Dr. Hare's single gold leaf electrometer, the Leyden jar, Leyden jar batteries, the spark, Kinnersley's thermometer, electrical discharge in a vacuum, the diamond jar, scintillating tube and magic squares, chemical experi-

## High Voltage equipment from 1865!

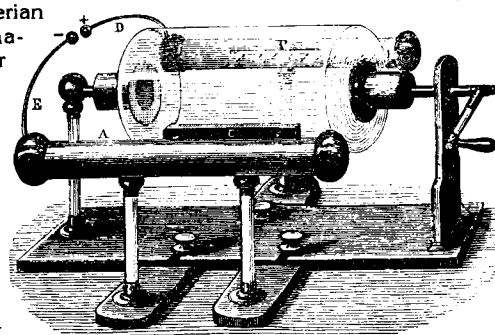


ments, Volta's lamp and more.

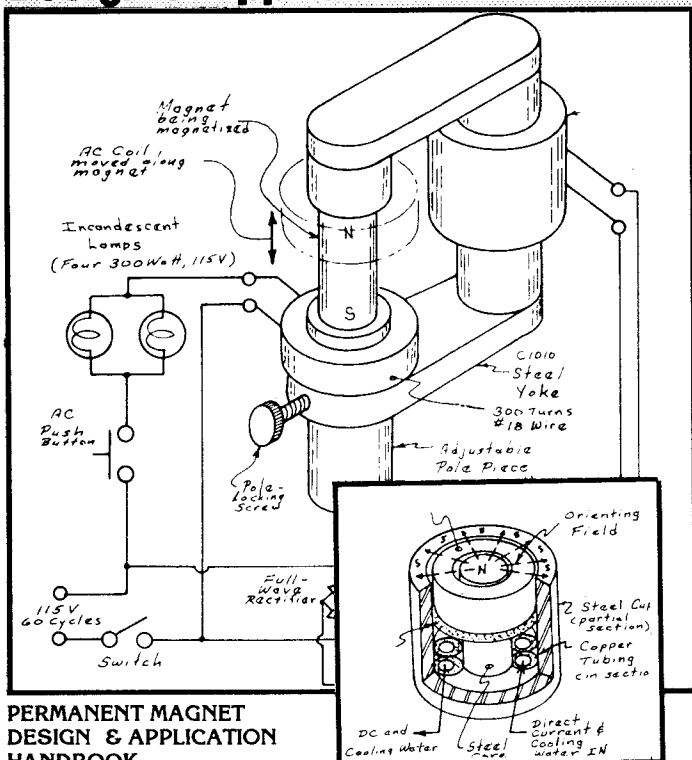
This is another collection of rare static electricity information that is no longer found in modern physics textbooks. And wood cut illustrations like these haven't been produced in decades. Get a copy of these. It will make an excellent addition to your reference library. 5 1/2 x 8 1/2 booklet 24 pages

Cat. no. 840

\$3.25



# Permanent Magnet Design & Application Handbook!



## PERMANENT MAGNET DESIGN & APPLICATION HANDBOOK

by Lester Moskowitz

Back in print! For now at least... The best magnet book I've seen.

Opening this book gives you the feeling you've opened the lab notebook of a famous magnet scientist. It's loaded with drawings, diagrams, equations, notes, hints, tips, circuit diagrams and more.

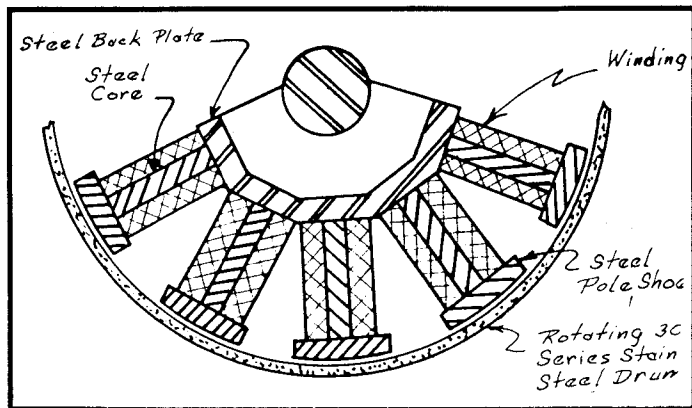
Chapters include brief history of magnets, terms and definitions, classification of magnets and materials, basic manufacturing processes, fundamentals of magnetism, general design considerations, leakage and fringing, circuit effects, exact design methods, and on and on.

You get all kinds of information and making, testing and using magnets from a circuit diagram for a 100 joule impulse magnetizer to suggestions for use in magnetic drives, motors and magnetos, magnetic welding benches and much more.

Expensive! But the best book of its type I've ever seen. Just the right mix of theory and practical application. Rare information. If you think you'll ever need it, get it now. It went out of print once, and is being reprinted (probably only for a short time) by another small publisher. I'm glad to see it's back. 9x12 hardcover 443 pages heavily illustrated

Cat. no. 1149

\$65.00



# VACUUM TUBES in Wireless Communication

Vacuum Tubes  
in Wireless Communication  
by Elmer E. Bucher

In 1919 radio had proven itself in the just-ended First World War. Radio's future looked bright.

The author explained his purpose in writing this book:

"In preparing the text of this book, the author had two principal objects in view: (1) to provide the Government and commercial wireless operator with a brief and simple explanation of the functioning of the circuits of the vacuum tube, (2) to lay before the experimenter and the practical operator the numerous circuits employed from time to time in the laboratory and in commercial practice.

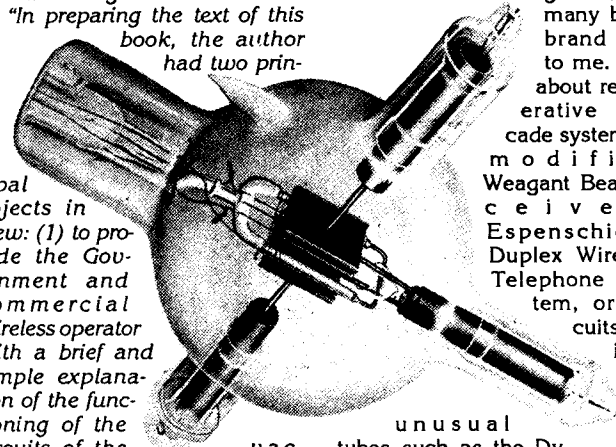
Outside of its obvious commercial value, the perfected vacuum tube affords the experimenter a most fascinating field of research. This is well evidenced by the fact that a single bulb with associated tuning apparatus connected to a four wire aerial 200 feet in length permits wireless signals to be received over distances 2,500 to 4,000 miles in daylight, and up to 6,000 miles in darkness."

On the title page is another description that says it all. "This volume shows over 140 different circuits for the practical use of Vacuum Tubes as Detectors, Radio or Audio Frequency Amplifiers, Regenerative Receivers, Beat Receivers, and Generators of Radio Frequency Currents.

The Two, Three and Four Element Oscillation Valves are described in detail together with the circuits used in daily practice. Cascade Amplifiers of the latest type for long distance reception are comprehensively

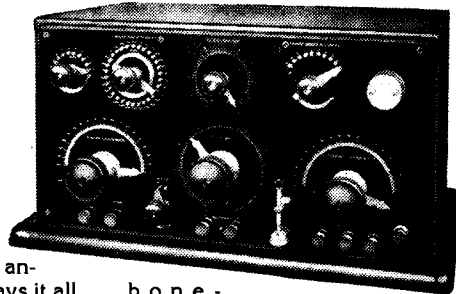
treated. Up-to-date circuits for long distance receptions are comprehensively treated..."

This almost all circuit diagrams, many being brand new to me. How about regenerative cascade systems, a modified Weagant Beat receiver, Espenschied's Duplex Wireless Telephone system, or circuits using



unusual tubes such as the Dynatron, the Pliodynatron, the Kenotron, or the Pliotron? Back then, this book described the cutting of technology as radio began to move away from spark gap code transmission to continuous wave methods using tubes.

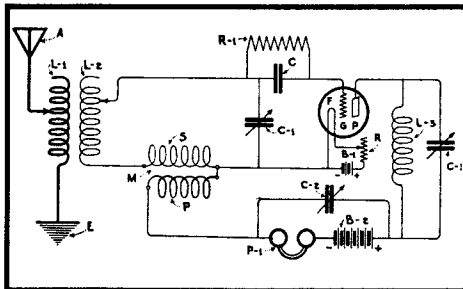
This is a great collection of very unusual radio history — something you don't find everyday. 'Course I know a lot of



bone- heads who would be just as happy if they NEVER found it any day. But don't you be one of them. Consider this carefully. Its unusual. 5 1/2 x 8 1/2 paperback 208 pages

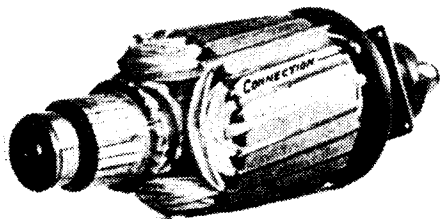
Cat. no. 20412

\$12.95



# AUTOPOWER

Classic 1935 text on automobile generator conversions and modifications!



## AUTOPOWER — Automobile Generator Conversions and Modifications

by S. W. Duncan  
reprinted by Lindsay Publications

From out of the Great Depression comes this unusual book on ways to make auto generators produce unusual amounts of power. The major problem with this book is that the generators being rewound are no longer available. Even if you were to find one of the units listed it would now be a hard-to-find part for an antique car. If you were to rewind one of these antique generators, I'd personally drive over and "smack you up 'long side the head!"

If that's the case, then why would I reprint something like this? Simple. The principles taught here can be applied to modern generators, DC motors, starter motors and more. You get detailed, practical how-to that can be adapted to modern needs. In other words, this is raw material for your brain. I can't guarantee your success, but I can guarantee that the info you find here is rare, and that you'll get your money's worth.

Chapters include changing a Ford Model A generator to a 110 volt alternator, get constant voltage at variable speed, converting a Dodge 12 volt generator into a 110 volt 500 watt alternator, changing a model T to 110 volt AC, making field and armature coils, changing a Delco generator to 110 Volt AC, the winding of automobile armatures, characteristics of DC generators, suggestions on mechanical construction of generators, figuring a new winding for an old frame, converting a farm light plant to 110 volt AC, and a chapter of definitions.

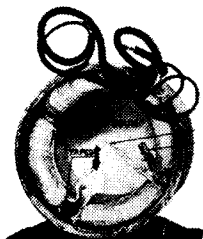
This is a heavily illustrated volume, wall-to-wall how-to.

We reproduced this from a stained, greasy, and obviously used copy of the original 1935 edition. We managed to clean it up to a remarkable degree, but the type is light in some places and some photographs are dirty. Although it's not perfect, it reproduced surprisingly well all things considered.

Get a copy of this. It's great even if it is old. This is one of those manuals that people talk about having seen years ago, but can no longer find. It's worth having a copy just for reference. Order a copy today. 5 1/2 x 8 1/2 paperback 56 pages

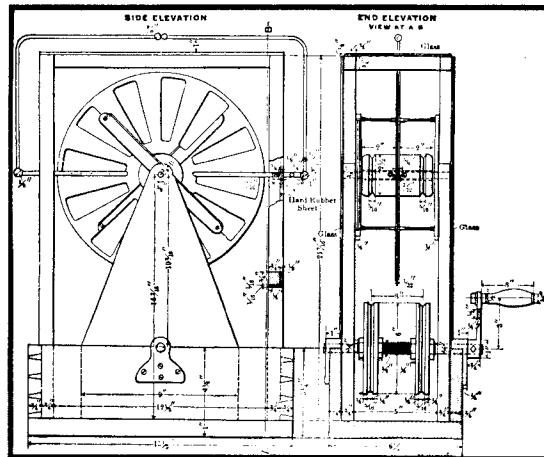
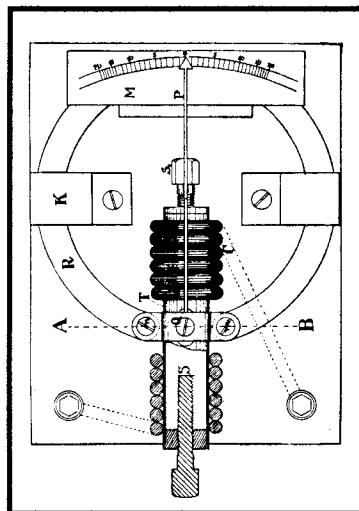
Cat. no. 4791

\$4.95



# ELECTRICAL DESIGNS!

## 34 Projects! From motors to Tesla Coils!



## ELECTRICAL DESIGNS

Articles from American Electrician Magazine  
reprinted by Lindsay Publications

By 1901 people were getting tired of shocking the cat. They realized that electricity was more than a novelty, and that it could be put to use doing heavy work. But electric motors were scarce and very expensive. It's no wonder that half of the pages in this book are devoted to building and winding motors.

As interesting and useful as motor plans are to some people, the beauty of this volume are the plans in the back half. You'll learn how to build rheostats, reactive coils, ammeters, voltmeters, a simple wattmeter, and a galvanometer.

Build a storage battery, a Bunsen photometer to measure the candlepower of light bulbs, an arc lamp, and a Nemst lamp. Build a telephone, a dry cell, and handy tools for working on motor commutators.

If you're into high voltage, you'll find useful plans for an induction coil, a Tesla-Thompson coil, a high voltage condenser for use with Tesla coils, and a powerful Wimshurst machine.

Every article is illustrated, and most drawings are dimensioned. The text is brief and to the point, but it should provide more than enough information for you to complete the project.

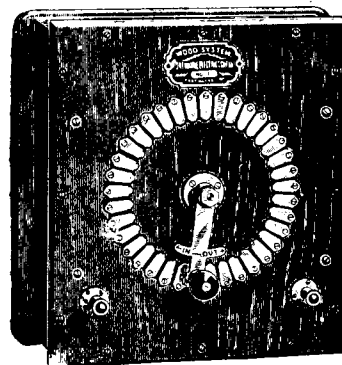
It doesn't matter whether you're interested in collecting ideas for winding modern working motors from the specs and instructions here, or if you're trying to build early exotic test equipment. You'll find something here to interest you.

With plenty of hard work you could probably build an entire electrical system: alternator, transformer, motors, rectifier, storage battery, lamps, telephone without having to buy any commercial parts other than wire! Think about it. Your friends would call you a modern day Thomas Edison!

Great ideas. Unusual plans. Plenty to keep your mind and hands busy. Get a copy of this! It's worth having! Order today. 5 1/2 x 11 paperback 262 pages

Cat. no. 4228

\$11.50



## Plans For

- one-sixth horsepower motor with drum armature
- one-sixth horsepower motor with ring armature
- one-fourth horsepower motor with drum armature
- four kilowatt combined AC & DC machine
- single phase rectifier
- universal alternator for laboratory purposes
- one-quarter horsepower induction motor
- simple transformer in four sizes
- construction of a reactive coil
- construction and calculation of rheostats
- simple voltmeters, ammeters, wattmeters
- d'Arsonval galvanometer
- sensitive mirror galvanometer
- Thomson Astatic Galvanometer
- cheap testing set
- construction and use of a photometer
- construction of a simple storage battery
- construction of a constant potential arc lamp
- an experimental Nemst lamp
- construction of an induction coil
- construction of a Tesla-Thompson high frequency coil
- condenser for extremely high potentials
- construction of a Wimshurst influence machine
- telephone transmitter and receiver
- construction of a dry battery cell
- some handy commutator tool
- and more!

# LeJay Manual

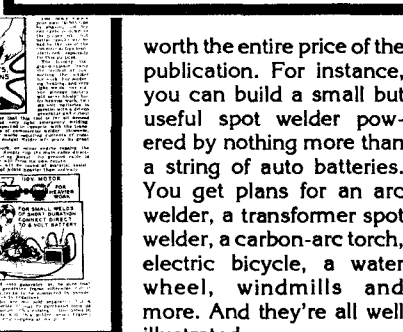
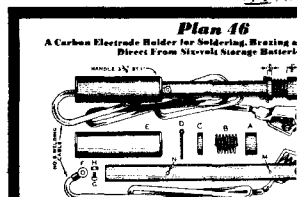
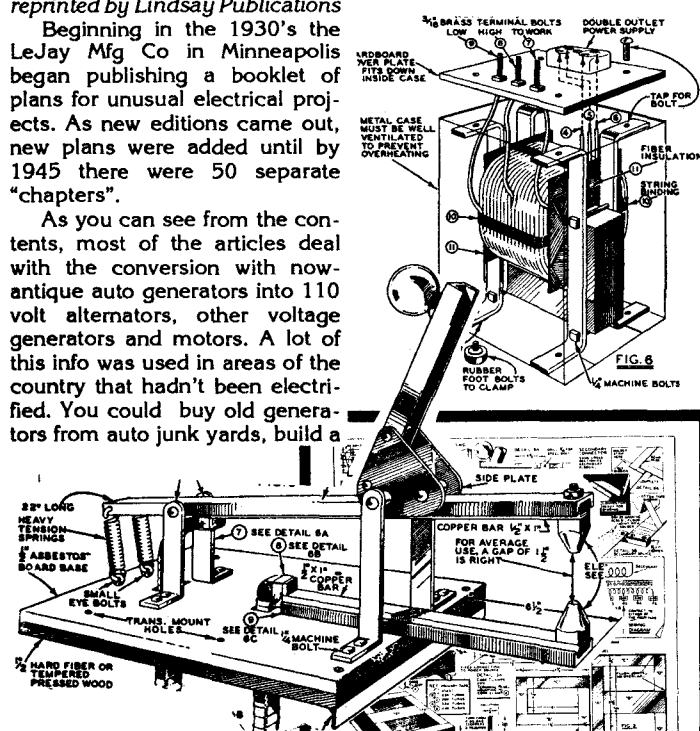
LeJay Manual - 1945 Edition

by Lawrence D. Leach

reprinted by Lindsay Publications

Beginning in the 1930's the LeJay Mfg Co in Minneapolis began publishing a booklet of plans for unusual electrical projects. As new editions came out, new plans were added until by 1945 there were 50 separate "chapters".

As you can see from the contents, most of the articles deal with the conversion with now-antique auto generators into 110 volt alternators, other voltage generators and motors. A lot of this info was used in areas of the country that hadn't been electrified. You could buy old generators from auto junk yards, build a



windmill, repair old auto batteries, use the electricity generated to power homebuilt motors, welders and so on.

Most of the information in this booklet is now of limited value simply because you can't get the generators listed. But rewinding data, hints and tips provided can help you in other rewinding projects for other types of generators.

There ARE several projects in this booklet any one of which is

worth the entire price of the publication. For instance, you can build a small but useful spot welder powered by nothing more than a string of auto batteries. You get plans for an arc welder, a transformer spot welder, a carbon-arc torch, electric bicycle, a water wheel, windmills and more. And they're all well illustrated.

This is a manual worth having in your reference library. You may not be able to use all of the information, but you'll get so many ideas even from those chapters you can't use, that you'll find this manual to be worth many times its retail price.

Great ideas. Fun to read. Useful projects. Worth having. Order a copy! 8 1/2 x 11 booklet 32 pages

Cat. no. 20013

\$5.95

## Contents

- 1 Plans for 110 Volt AC Light Plant made from Ford Model "T" Generator
- 2 200 Watt AC Generator for Automobile Made from Ford Model "A" Powerhouse
- 3 A 6 Volt Slow Speed Generator (with plans for all-metal windmill)
- 4 6 Volt & 12 Volt Slow Speed Generators from Dodge "G" or "GA" Northeast Generator also from other Generators
- 5 A 32 volt slow speed wind light Plant Generator
- 6 One 32 Volt Motor, One 110 Volt Motor, One 32 Volt Generator, One 110 Volt Generator from Dodge Generator
- 7 How to Make a Grinder, Series Motor, Constant Speed Motor, A Universal AC or DC Motor and a Soldering Iron
- 8 A 75 to 110 Ampere Arc Welder Made from Dodge "G" or "GA" Generator. Also Dual Welders.
- 9 Pendulum Type Fence Controller made from Ford "T" Coil
- 10 Plans for Building a Complete Wind Light Plant Including Tower, Propeller and Generator Charger
- 11 A 110 Volt AC Light Plant Generator
- 12 A "B" Eliminator For Your Battery Operated Radio
- 13 An Automobile Generator Booster Control
- 14 A 6 Volt Slow Speed Generator from Standard 14 Slot 28 Bar Generator
- 15 A 32 Volt Constant Speed Generator made from Ford "T" Generator
- 16 A 2 Volt Slow Speed Generator from Standard 14 Slot 28 Bar Generator
- 17 How to Convert A 6 Volt Cut-Out for 2 Volt Operation
- 18 Directions for Repairing Your Own Batteries
- 19 A Water Wheel Made from Old Automobile Wheel
- 20 An Electric Outboard Motor from Old Ford "T" Generator
- 21 A Gas Engine or Motor Driven Generator with Drawings in Detail
- 22 An Armature Growler for Testing Auto or Slow Speed Armatures
- 23 Two 32 Volt Series Motors from Dodge "G" or "GA" Generator
- 24 A 32 Volt Heavy Duty Motor made from Dodge "G" or "GA" Generator
- 25 A Bench or Breast Drill for 6, 12, or 32 Volts from "T" Generator
- 26 A 6 Volt Motor for Drill Press, Washing Machines, etc. made from Model "T" Generator
- 27 One 12 volt Motor and One 32 volt Motor Made from Model "T" Generator
- 28 Two 6 Volt Generators from the Dodge, also general information
- 29 A 110 V. or 220 VAC Portable Transformer for Arc Welding
- 30 A 110 Volt Spot Welder — 1 Kw. Input Normal Draw 10 to 11 Amps
- 31 A Direct Drive 32 Volt Wind Plant — All Metal Construction
- 32 A Battery Spot Welder
- 33 Armature Diagrams for Autolite, Bosch-Autolite and Bosch Generators
- 34 Armature Diagrams for Delco, Delco-Remy, & Remy Generators
- 35 Armature Diagrams for Ford A, B and V8 Generators
- 36 Armature Diagrams for Northeast Generators
- 37,38 Armature Diagrams for Atwater-Kent & Dyneto Generators
- 39 Armature Diagrams for Leece-Neville Generators
- 40 Armature Diagrams for Wagner Generators
- 41 Armature Diagrams for Westinghouse Generators
- 42 Plans for Installing Lights on Your Tractor
- 43 Two Types 110 Volt AC Insect Exterminators
- 44 An Electric Scooter Using a 6 or 12 volt Battery for Power
- 45 An Electric "Go Bike" Using a 6 or 12 volt Battery for Power
- 46 A Carbon Electrode Holder for Soldering, Brazing and Light Welding Direct from Six-volt Storage Batteries
- 47 Ball Type Fence Controller Made from Ford "T" Coil
- 48 110 Volt AC 500 Watt Self Excited Generator from Dodge Model "G" or "GA" generator
- 49 110 Volt AC 60 Cycle 1/2 HP Synchronous Motor from Dodge Model "G" or "GA" Generator
- 50 An AC Welding Transformer Using Dodge Generator Coils
- Appendix Windpower Information, Definitions, etc.

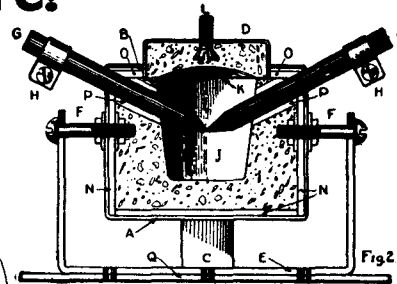
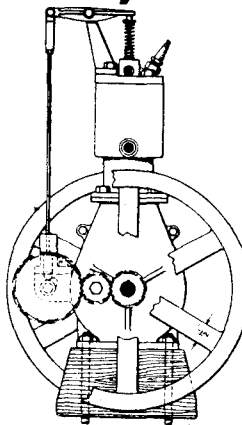


Discover unusual construction plans from rare vintage magazines (September 1918 to February 1926) such as "Everyday Engineering Magazine", "Electrical Experimenter", "Practical Electrics" and "Science and Invention".

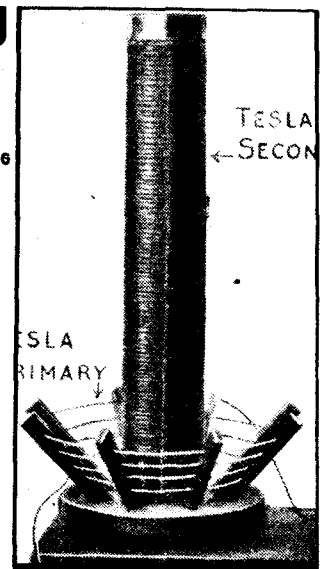
Build a guide that turns a common file into a remarkably good milling machine. Get two different sets of plans for building unusually sensitive laboratory chemical balances. Build a small electric arc furnace with water rheostat capable of reaching temperatures of over 6000° F, a small surface grinder having a 6"x6" table, and a universal lathe attachment that the author claims is good for surface grinding, indexing, shaping, planing and milling. Build a one-lung one-horsepower overhead valve gas engine from scratch, and even a 24" Tesla coil.

Although you may never get your hands on the originals, at least you can get the plans they contained. Any builder will find this fascinating

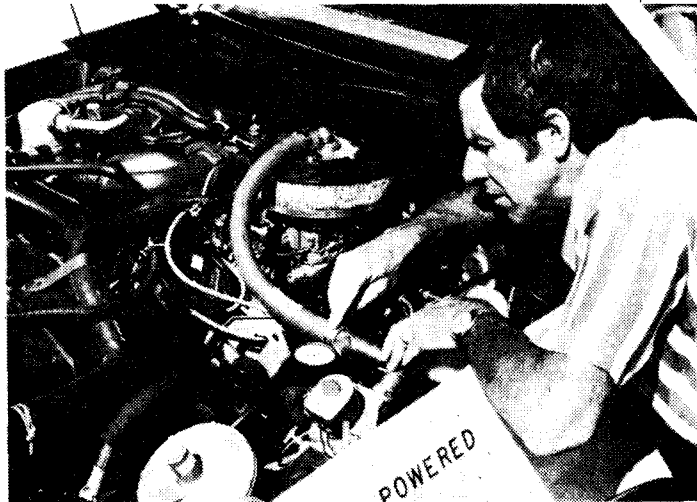
## Electric Furnace, Milling Machine, Engine, Tesla Coil, More!



reading. Get a copy. 8 1/2 x 11  
booklet 22 pages  
Cat. no. 848 \$5.95



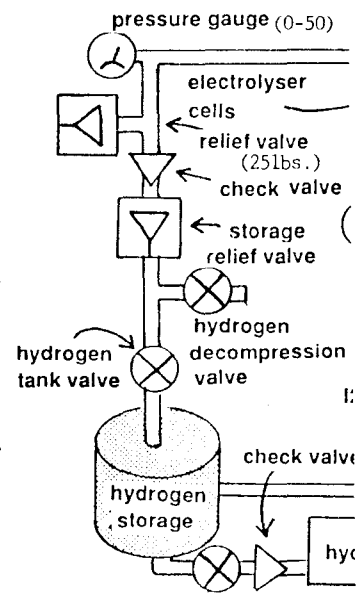
## Hydrogen Fuel!



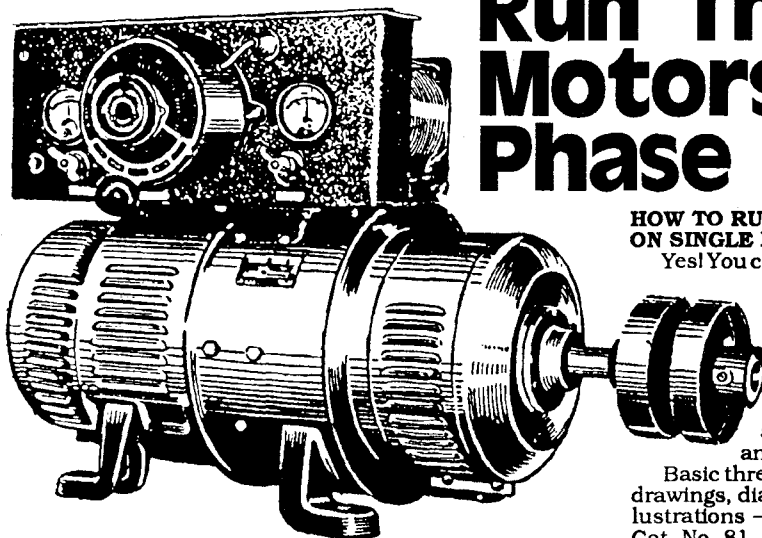
### FUEL FROM WATER by Michael A. Peauey

Here's the best book of its type that I've seen yet. You'll read about hydrogen generators, storage devices, modifications of autos for using hydrogen fuel, the hydrogen homestead and more. You'll learn about batteries and inverters for providing 110 VAC for the home without connecting to the power company. You get lists of manufacturers, other books, and sources of additional information. This well illustrated, typewritten manual with a plastic spiral binding gives you what is obviously hard-to-find information.

Nicely done. I'd like to offer more books like this. Rare information. I think you'll like it. 8 1/2 x 11 paperback 80 pages  
Cat. no. 2010 \$16.00



## Run Three Phase Motors on Single Phase Power



### HOW TO RUN THREE PHASE MOTORS ON SINGLE PHASE POWER

Yes! You can run three-phase motors on single-phase power using any one of three excellent methods. First, lathes, drill presses, and other machine tool motors can be run with the capacitor method. Second, the autotransformer method (a technique you should buy rather than build) is useful for motors running under continuous full load. And finally you can run a whole shop full of three-phase motors from a single, easy-to-build dynamic converter! No rewinding is necessary. These methods are good to at least 150 hp and 220 volts! Low starting currents and excellent power factor are possible.

Basic three-phase and induction motor theory is included. Complete with drawings, diagrams, and capacitor values. 4 1/2 x 7 booklet 20 pages, 18 illustrations — a BARGAIN!

Cat. No. 81

only \$3.00

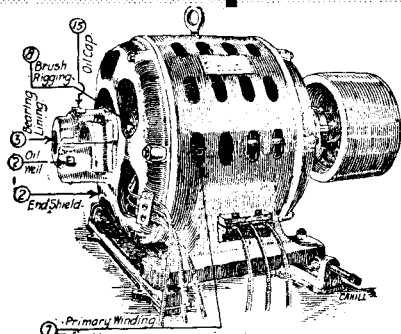
# ARMATURE WINDING and Motor Repair!

## ARMATURE WINDING AND MOTOR REPAIR

by Daniel H. Braymer

From 1920 comes this motor rewinding book loaded with drawings and photographs that will show you how to build both AC and DC machines.

Chapters include: DC machines, AC machines, shop methods of rewinding DC armatures, making commutator connections, testing DC armature windings, operations before and after winding DC armatures, insulating coils and slots for winding, shop methods for rewinding AC machines, testing induction motor windings for mistakes and faults, adapting DC motors to changed operating conditions, practical ways for reconnecting induction motors, commutator repairs, adjusting brushes and correcting brush troubles, inspection and repair of motor starters and gen-



## Classic 1920 Text!

erators, diagnosis of troubles, methods to solve special troubles, tables and more. One special chapter at the back will show you how to build the special tools and jigs, an armature sling, a pinion puller, coil winding machine, a coil taping machine, commutator slotter, armature banding machine and more.

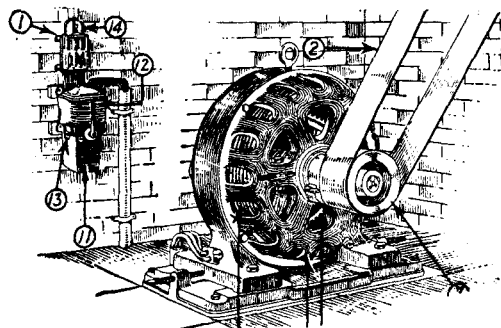
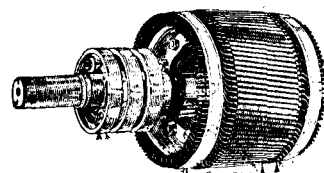
The motors described are large types used in factories. But the principles apply to the smaller motors you and I use.

You'll learn how to reconnect induction motors for different voltages and phases, how to operate a DC motor as a generator and visa-versa, change the DC motor windings for different voltages, and more.

You'll be taught all the techniques from removing old windings and cleaning slots, to winding the coils, insulating the end connections, inserting the coils, painting the windings, relining split bearings, and much more. You get data on all types of wave and lap windings, varnishing and insulating materials, and much more.

I make you no promises, but this is the logical place to start should you want to rewind a motor to particular voltage, wind a generator or alternator for use with a windmill or waterwheel, rewinding a big generator for use as a welder, modify a DC motor for use in an electric car, and so on.

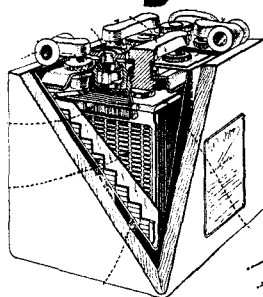
This is a beautiful book. You get over 500 pages of clearly written, wall-to-wall practical how-to with excellent illustrations. This is as good as, and in most cases, is much better than, any motor book



I've carried in the past, regardless of price. It's a gem that should be in the reference library of most "machine freaks" (that includes you, son). Order one as soon as you can. 5 1/2 x 8 1/2 paperback 540 pages

Cat. no. 4384 \$16.95

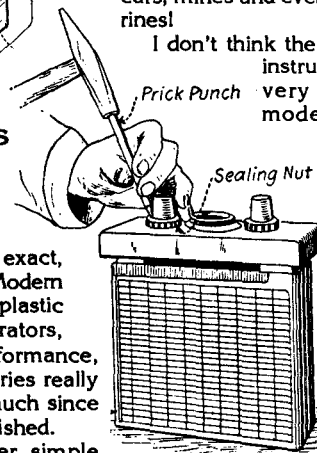
# Storage Batteries Simplified!



whole chapter deals with battery defects, how to make electrolyte, dismantling and repairing batteries. You get full details on how to charge batteries, plus a chapter on their use covering auto starting and lighting, electric autos, railroad use, street cars, mines and even WWI submarines!

I don't think the battery repair instructions will be very useful with modern batteries,

and I wouldn't even try to build some of the battery chargers described. Nevertheless, there is so much excellent material here that I give it



## STORAGE BATTERIES SIMPLIFIED

by Victor Page  
reprinted by Lindsay Publications

It's old, 1917 to be exact, but it's damned good. Modern storage batteries have plastic cases and plate separators, but in operation, performance, and maintenance batteries really haven't changed too much since this book was first published.

Five chapters cover simple lead plate batteries, Plante plates, pasted plates, Edison batteries, details of plate construction, Gould plates, Exide plates, separator function and more. One

high marks. Loaded with photographs, drawings and charts. 5 1/2 x 8 1/2 paperback 220 pages  
Cat. no. 4473 \$8.95

# Lead-Acid Batteries and How They Work!

## SECRETS OF LEAD-ACID BATTERIES

To get the most out of lead-acid cells whether you used them in your auto, an electric car, an alternate energy system or other application, you should know what's in this jam-packed booklet.

You'll learn how batteries are rated, built, the different types of charging, how they discharge and why they fail. Learn to quick charge, equalize cells, and even

perform a "rejuvenation" treatment that helps some "sick" batteries. Testing of used batteries and electric auto applications are also discussed.

This is much more than basic information but without heavy mathematics and chemistry. Get a copy!

5 1/2 x 8 1/2 booklet 44 pages  
Cat. no. 86 \$5.00

# Convert DC into 110 Volt 60 Cycle AC!

## POWER INVERTER TECHNOLOGY

You can convert 12 volts DC into 120 volts AC 60 cycle with an electronic inverter. If you're intending to invest in an inverter, there's more to know than just its cost and power rating. Do you know what type of design it is? Can it handle high power factors without blowing the transistors or SCRs? Can it lock to the local power grid?

Learn about these problems and much more in this popular jam-packed technical report. Learn about transistors, SCRs, series and parallel commutation, waveform filters, back current flow, and much more. You'll get

reports on several commercial inverters, names and addresses of a variety of manufacturers, and sources for free plans should you want to attempt building an inverter.

Other books on the market are either childishly simple or incredibly complex. This is in between, being a translation into layman's terms of the concepts in complex engineering texts. This is not a how-to text. This is an education. You'll learn how to spend your money wisely and get the most from an inverter. Rare info. Reasonably priced! Get a copy. 5 1/2 x 8 1/2 24 pages 2nd edition  
Cat. no. 83 \$4.00

# I was fed-up! Disgusted!

The catalog you hold is the result of my personal frustration with being unable to find the books I wanted in bookstores and libraries. No one seemed interested in carrying the unusual books I wanted.

If you want the job done right, you have to do it yourself. I went out and found the books I wanted. The catalog you hold is the result of years of searching.

In it you'll find great reprints of many rare old books. I found that quite often books published 80 years ago contain better how-to information than modern books.

Admittedly, some of the reprints are priced higher than I like to see, but printing small quantities of unusual books is expensive. Even so, a reprint usually costs much less than the original volume — if you're lucky enough to find one.

I don't reprint nor offer second rate books. There's never time or money enough to offer all the good books that turn up, so why fool around with second-rate material?

Besides, I would never offer you something that I wouldn't buy myself and be happy with.

In essence, you're digging through my private collection of old books, with a few of the best new books thrown in.

The books you order are covered by a money-back guarantee. But I don't really need to offer one. People are satisfied. Truth is everyday we get unsolicited comments like "great books" and "never disappointed". Books rarely, if ever, come back for refund or credit.

And you'll probably be surprised by the fast service we offer. Oh, sometimes we get hit with a deluge of orders or a truckload of books doesn't arrive on time and we run out. Things might slow down for a short time. But that's the exception, not the rule.

This catalog is the result of my frustration. I call the shots now. I make sure the job gets done right. I offer you great books, fair prices, as fast a service as costs will allow, and above all, fair dealing. You're dealing with me, a certified book freak, not a huge corporation. You can order in confidence.

So, welcome to one of the best book catalogs you'll ever see.

**PS:** Don't ever hesitate to call or write if you think something might have gone wrong with your order. Problems won't get fixed until we know about them...



# Crystals & Crystal Growing

Grow your own  
easily and  
inexpensively!



## CRYSTALS AND CRYSTAL GROWING

by Holden & Morrison

Grow beautiful crystals! You can! with this book...

Crystals are all around from the minerals we mine and the castings you pour to the liquid crystal display in your wristwatch and calculator. Not only will you learn about what crystals are and how they grow, you'll also learn how to grow your own, easily and inexpensively.

Chapters include: solids and crystals, solutions, solubility diagrams, two methods for growing crystals, building blocks for crystals, twelve recipes, symmetry, arrangements of atoms, cleaving and gliding crystals, melting and transforming, piezoelectric effect, optical experiments and more. You also get sources of supplies, making a spectroscope, suggestions for research, more books and articles.

Excellent book. Easy to read and understand. It was first published in 1960, so you know it's a good book. Get a copy. A great science fair project for boys and girls. 5x8 paperback 318 pages

Cat. no. 546

\$9.95

# CHEMICAL CROSS REFERENCE!

Convert old-fashioned  
chemical names into  
modern names! More  
than 2000 entries!

Lindsay's  
**CHEMICAL CROSS REFERENCE**  
by Lindsay Publications Inc

If you haven't run into the problem yet, you will. You'll be reading some old chemical formula calling for mirbane oil, salt of satum, or liver of sulphur. A quick check of this handy list of chemical terms would tell you that you need nitrobenzene, lead acetate, or potassium sulphide.

What we did was enter into our computer two thousand chemical equivalents gleaned from a variety of chemistry textbooks, industrial references, and formularies in our reference library dating back to the early 1800's. We asked the computer to merge all of the lists and sort them into alphabetical order. The result is a chemical cross reference.

We have kept unusual and probably-incorrect spellings. We have made no attempt to verify that the definitions are correct. What we have done is provide you with one master list of the best equivalents we could find. We've already found it useful, and you will too. Get a copy for your reference library. 5 1/2 x 8 1/2 paperback 44 pages

Cat. no. 20170

\$4.95

## "Lindsay, you're disgusting!"

Lindsay—

You're disgusting. I've been trained by [a well-known chain store] to stand in line and wait and wait while 97 employees stand around and watch one clerk trying to check out a long line of customers. I've been given training at [a well-known hamburger chain] to wait to be waited on then be served the wrong items.

All mail order companies take six weeks to six months to send the catalog much less the order. I sent for four catalogs the same day I sent for yours. I received my first order from your company before I received the first catalog from any other company. [Your fast service] is unAmerican. What if the government caught on that they too could be efficient? Think of it. It could ruin democracy as we understand it. Please stop [being so fast] before the IRS hears about your management policy.... but not before you send my order.

Larry Sturgill

# Handbook of Chemical Technology

HANDBOOK OF CHEMICAL TECHNOLOGY 1872

by Rudolf Wagner

translated by William Crookes

reprinted by Lindsay Publications

In the 1870's a technological revolution was sweeping the US and Europe. Although the Americans were tops in mass production, it was the German chemists who lead their field. The master reference for chemists the world over was *Wagner's Handbook*. This 1872 translation of the eighth German edition can be yours for much less than an original copy should you be able to find one.

And what a book it is!

If you're looking for information on early and/or simple ways of making chemicals, refining metal, formulating glue, paper, dyes or just about anything else chemical in nature, this is the reference for you. I have never seen such a comprehensive collection of incredible technological detail in a single volume anywhere else.

Want to refine iron ore into steel? Want to make sulphuric acid? And use it to make nitric acid? And use it to make explosives? Care to brew beer? How about a batch of whiskey? A loaf of bread? And on, and on, and on. You can see from the table of contents that this is a whole encyclopedia in a single volume — 745 pages of small type with 336 illustrations mostly of the apparatus used in manufacturing the products described.

This is not really a cookbook. You won't find step-by-step instructions. But you will find more detail on a wider variety of basic essential processes, many of them made obsolete by more complicated processes, than in any other volume. I can't help believe that if you're investigating the possibility of tanning hides, making illuminating gas, making charcoal, making soap,

or anything else that this single volume can provide more information in less time than searching through most libraries for a month of Sundays.

You'll see hundreds of illustrations of equipment along with enough detailed information on its construction and use that you should be able to begin experimentation, or at least decide if your idea is worth pursuing.

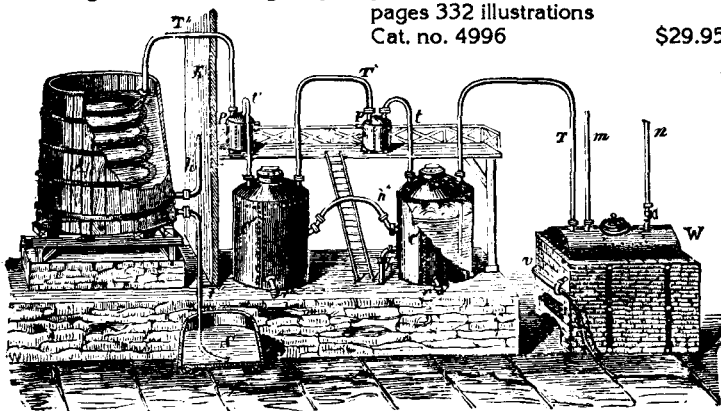
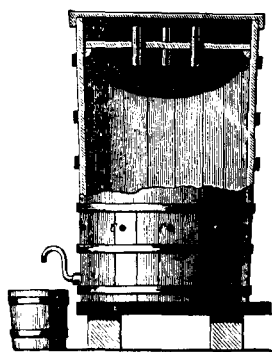
Yes, this is an expensive volume. The price reflects the cost of reprinting a small number of this classic reference. But you get more than what you pay for. This is quality. Today we have sophisticated, hi-tech processes that are closely guarded industrial secrets. Here you learn how it was done before large corporations and PhD chemists took over production. Be warned, though. This is old world thinking. You run the risk of poisoning yourself. These methods can be and probably are dangerous.

This incredible classic text will definitely fill a void in your reference library. I've never seen anything like it. And it's almost a sure thing you haven't either. It's expensive, but it's worth every penny and then some. Order a copy. You won't be disappointed. 5 1/2 x 8 1/2 hardcover 745 pages 332 illustrations

Cat. no. 4996

\$29.95

**Absolutely  
Incredible  
1872  
Technical  
How-to!**



## Contents

**Division I — Chemical Metallurgy; Alloys; and Preparations Made and Obtained from Metals.**  
Iron; Pig or crude iron; Malleable, bar or wrought-iron; Steel; Iron Preparations; Cobalt; Nickel; Copper; Preparations of Copper; Lead; Preparations of Lead; Tin; Preparations of Tin; Bismuth; Zinc; Preparations of Zinc; Cadmium; Antimony; Antimonial Preparations; Arsenic; Quicksilver or Mercury; Preparations of Mercury; Platinum; Silver; Gold; Maganese and its preparations; Permanganate of Potassa; Aluminum; Magnesium; Electro-Metallurgy

**Division II — Crude materials and products of chemical industry**  
Carbonate of Potassa; Saltpeter, Nitrate of Potassa; Nitric acid; Technology of the Explosive Compounds — gunpowder, and the chemistry of fireworks or pyrotechny; Nitroglycerine; Gun-cotton; Common salt; Manufacture of Soda — native soda; Soda from plants or soda-ash; Soda Prepared by Chemical Processes; Preparation of Iodine and Bromine; Sulphur; Sulphurous and Hyposulphurous Acid; Manufacture of Sulphuric Acid; Sulphide of Carbon; Hydrochloric Acid and Glauber's Salt, or Sulphate of Soda; Bleaching Powder and hypochlorites; alkalimetry; Ammonia and ammoniacal salts; Soap making; Boric or boracic acid, and borax; Production of alum, suphates of alumina, and aluminates; Ultramarine

**Division III — Technology of Glass, Ceramic Ware, Gypsum, Lime & Mortar**  
Glass manufacture; Ceramic or earthenware manufacture including hard porcelain, tender porcelain, stoneware, Fayence ware, common pottery, brick and tile making; Lime and lime-burning; Mortar including common or air-setting mortar and hydraulic mortar; gypsum and its preparation

**Division IV — Vegetable Fibers and Their Technical Application**  
Hemp; Cotton; Paper making — hand paper, machine paper, pasteboard and other paper; Starch; Sugar manufacture; Cane Sugar; Beet-root; sugar; Grape sugar; Fermentation; Wine-making; Beer-brewing; preparation or distillation of spirits — preparation of vinous mash and distillation of the vinous mash; Bread baking; Manufacture of vinegar; Preservation of wood; Tobacco; Technology of essential oils and resins; Cements, lutes and putty

**Division V — Animal Substances and Their Industrial Application**  
Woollen industry; Silk; Tanning; Glue Boiling; Manufacture of Phosphorus; Requisites for producing fire; Animal charcoal; Milk; Meat

**Division VI — Dyeing and Calico Printing**  
Aniline colours; Carboic Acid colours; Naphthaline pigments; Anthracen pigments; Pigments from Chinchonine; Red Pigments occurring in plants and animals; Blue dye materials; Yellow dyes; Bleaching; Dyeing of spun yarn and woven textile fabrics; Printing of woven fabrics

**Division VII — Materials and Apparatus for Producing Artificial Light**  
Artificial light from candles; Illumination by means of lamps; Gas; Paraffin and solar or petroleum oils; petroleum

**Division VIII — Fuel and Heating Apparatus**  
Fuel; Wood; Peat; Carbonized peat; Brown-coal; Pit coal or coal; Petroleum as fuel; coke; artificial fuel; gaseous fuel; heating apparatus; heating dwelling houses; boiler heating and consumption of smoke





## Strange Electronics Plans!

**BUILD YOUR OWN LASER, PHASER, ION RAY GUN. . .**

by Robert E. Lannini

Here's one of the most bizarre collections of how-to plans I have ever seen. You'll learn how to build high-power pulsed red ruby laser

- beginner's simulated laser
- visible red laser
- pulsed laser rifle
- ruby laser gun
- CO<sub>2</sub> laser
- laser light detector
- plain field generator
- phaser shock-wave pistol
- ultrasonic generator
- ultrasonic listening device
- 250 kv Tesla Coil
- ion ray gun
- magnetic field distortion detector
- light-beam communicator
- solid-state Tesla coil
- infrared viewer
- FM voice transmitter
- long-range telephone xmtr
- parabolic microphone
- paralyzing device
- wireless repeater xmtr
- much, much more!

gun, high-power continuous IR CO<sub>2</sub> Laser, ultrasonic field generator, programmable high-power ultrasonic generator, 250,000 volt Tesla coil, magnetic field distortion detector, solid-state Tesla coil, a variety of wireless "bugs", a super-sensitive parabolic microphone, electronic paralyzing device, battery charger and eliminator and much more.

Lannini is an experienced electronics inventor, and holds many patents. He'll give you parts lists, wiring diagrams, assembly diagrams and all you need to get these projects built. I don't think that

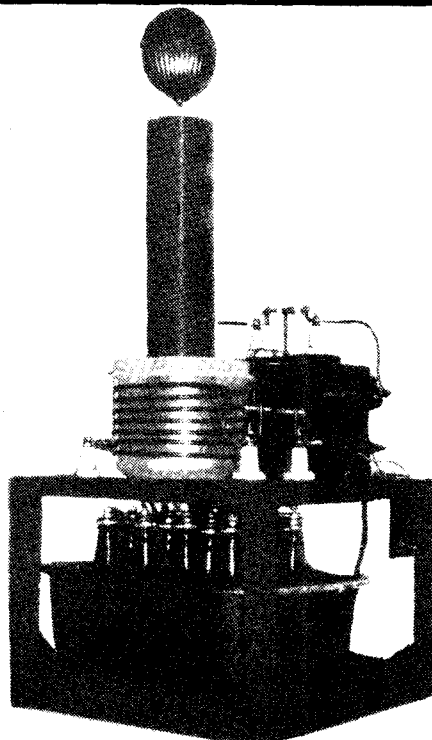
it's any coincidence that almost every plan has a footnote telling you that kits are available from Information Unlimited, Inc., which is owned by the author and which advertises in the back of the science and mechanics magazines. No doubt, that firm's best selling plans have been reprinted in this single volume.

This book is expensive, but it delivers. I really like this, and I'm sure you will too. Order a copy, even if it has to sit for two years on the shelf before you get ready to build. Excellent book. 8 x 9 1/2 paperback 390 pages.

Cat. No. 346

\$17.95

# Build a TESLA COIL!



## TESLA COIL

by George Trinkaus

Here's another Tesla coil book. It's a bit expensive for what you get, and much of it is a repeat, but there are some bits and pieces that I haven't seen.

You get a brief overview of Tesla, his career and his coil. Then you get instructions on building a good sized coil using a neon transformer and a spark gap to drive the primary. The detail is not great but is probably adequate.

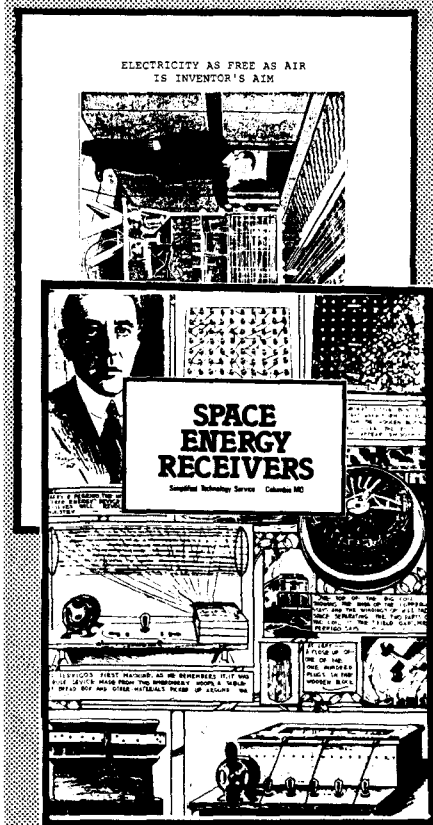
You get brief discussions and details on capacitors, glass-and-foil capacitors, oil capacitors, salt-water capacitors, series and rotary spark gaps, a schematic for a 6L6 vacuum tube driven coil, construction notes, hazards, Tesla lighting, ozone disinfectant, and magnifying transmitter. All this in 21 pages!

Obviously, the booklet does not go into great detail, but there are ideas and clues here that you might not have thought of yet that might be worth the price and then some. You'll have to decide. Consider it carefully. 7 x 8 1/2 booklet 21 pages

Cat. no. 741

\$4.95

# Space Energy RECEIVERS



## SPACE ENERGY RECEIVERS

by Simplified Technology Service

"Space energy receivers... may be defined as a class of devices which apparently collect electrical energy from the surrounding space without applied force, by some process other than chemical or mechanical action..."

What? Pull energy out of thin air? That's what they claim. Do they work? At least a few were built to defraud gullible investors. BUT! There IS energy out there, and extracting it would be comparable to geothermal power. You're not creating energy, just tapping existing reserves.

Do the machines described here really work? Maybe. Maybe not. Whether you believe they do or not is of little importance because either way you'll find this interesting reading. You'll enjoy the photos, diagrams, and claims.

You'll learn about Tesla's patent, the Moray unit, the Yglesias machine, the Gustav Weisse receiver, the Meyers machine, Hartwig's pendulum observations, Perrigo's fantastic machine seen in Congress, the Mushroom generator, and excerpts from a formerly classified British report on a world War II German machine, that is now declassified.

In addition, you get reference books to read, a list of experimenters, and other tidbits. It's quite interesting, and if there is one complaint I have, it's that "Receivers" is just not long enough. I think you'll like it. Very unusual! Order a copy. 8 1/2 x 11 booklet, 21 pages.

Cat. No. 882

\$4.50



# HOW TO ORDER!

## • Name & Address

Print your name and address clearly on the order blank or piece of paper you're using.

## • List the Books You Want

List the books. Use both book number and part of the title for accuracy. We need book numbers for faster processing of your order.

## • Total the Prices

Total the prices. Illinois residents add 6 1/4% sales tax.

## • Add Shipping & Handling

Add a shipping charge of 75¢ for the first book and 25¢ for each additional book. Special Handling (box at right) costs more.

## • Enclose Payment

Enclose check or money order. Supply Mastercard or Visa numbers, expiration date, and your signature. Sending currency is risky.

## • Send It!

Send it to Lindsay Publications Inc, PO Box 12, Bradley IL 60915-0012

### PRICES AND AVAILABILITY

Prices and availability are subject to change without notice! Your packing slip will show the current price regardless of what might be in the catalog. Prices often change between the time the catalog goes to press and the time you order. Call if you need to know before ordering.

### CATALOGS

Catalogs are issued several times each year. If your catalog is more than year old, write for a current copy before ordering. A new copy will be sent with an order at no charge if so requested.

### CUSTOMER SERVICE

Calls concerning problems should be placed during normal business hours. Although they are not required to do so, packing crews working after hours often take phone orders as courtesy to customers. They are not qualified nor authorized to provide customer service. Please call earlier in the day.

### GIFT CERTIFICATES

Gift certificates are available in any amount. If you want a new catalog, request one at no charge.

### BACKORDERS

Because most backorders are short term, we will charge you for your entire order even though a book may be out of stock. The book

## IMPORTANT NOTICE!

I do not endorse the methods or plans offered here. Some are dangerous, and I cannot be responsible for accidents. I cannot vouch for the accuracy or safety of the methods in these publications. This is a bookstore, not a school. Be very careful. Use good judgement in your work.

will be shipped at no additional charge when it arrives. This policy applies to all forms of payment: check, money orders, COD's and charge cards.

For instance, you order six books, five of which are shipped COD immediately, and one is backordered. Your COD charge is for all six books. The backordered book will be shipped at no additional expense to you as soon as available.

**CANADIAN CUSTOMERS** — Please remit in Canadian Postal Money Orders in US Dollars, Visa, Mastercard, or check drawn on a US Bank. We can't find a US bank than wants to handle checks from Canadian Banks. It must be a conspiracy!

**Phone Your Order In** — Call us at 815/468-3668 during normal business hours (nothing is ever normal when you're forced to work with Lindsay!) and we can get your order into the system immediately.

**FAX Us Your Order** — Fax us all the necessary information at 815/468-3694. On line 24-hours.

**COD Orders** — COD's are sent UPS at a cost of several dollars more.

**NEXT DAY AIR** — UPS Next Day is available if necessary. Books are heavy and this service can be quite expensive.

**SECOND DAY AIR** — UPS Second Day air (2-day delivery) at less cost than next day air.

**PRIORITY MAIL** — First Class Mail (all 1st class mail is airmail) costs several dollars more depending on weight and is supposed to provide 3 day delivery to any zip code.

**Regular Shipping** — Orders are normally shipping via Book Post (US Postal Service) or via UPS depending on order weight

## GUARANTEE

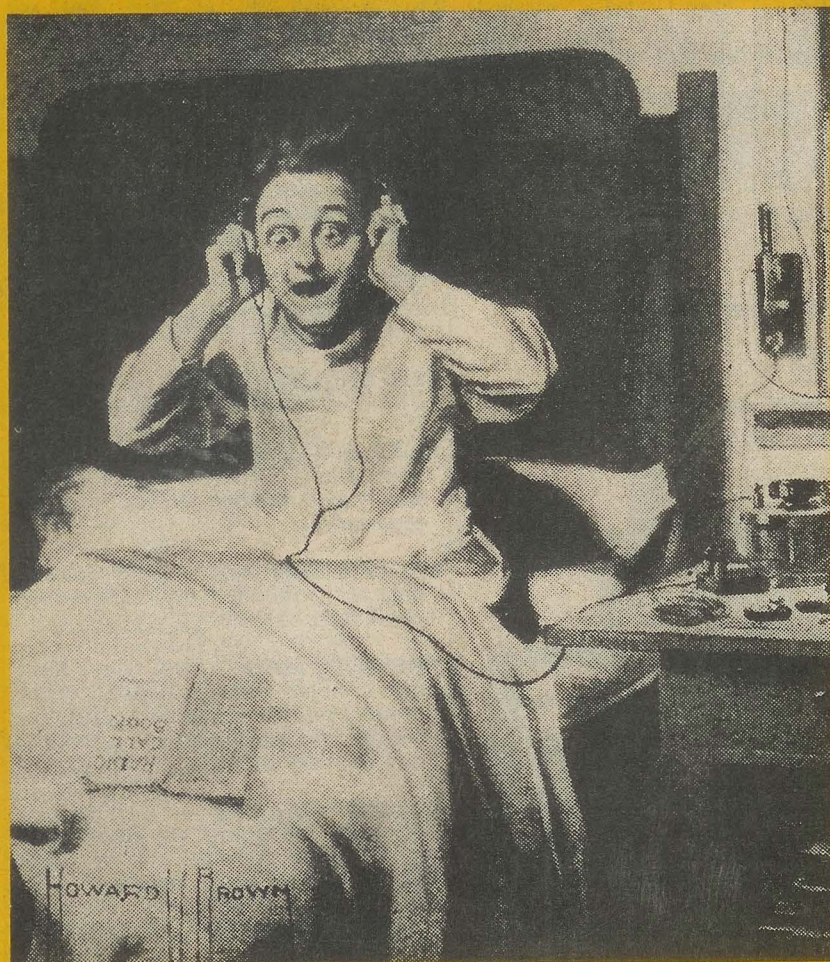
All books are guaranteed. If you find a book that doesn't meet your expectation, return it immediately for credit or refund. I don't expect you to keep and pay for a book you don't like. You don't have to explain, but if you do, it will help us improve the selection we offer.

We don't offer an approval service. Don't order 8 books and expect to return 7. Order books you really want. You'll find as tens of thousands of other people have, that the books we offer are so good, we don't really need to offer a guarantee. But we do anyway. You'll be satisfied. We guarantee it. There's no other way to do business.

If you're returning a book, pack it well. Credit will be issued for the price of the book (and sales tax, if any). We do not issue refunds on shipping and handling charges.



# You could be ELECTROCUTED!



**if you wet the  
bed while  
wearing  
earphones!**

But then you may *want* to be electrocuted! If you miss out on the books inside, you're going to wish you were dead anyway. People have been very disappointed to find that the book they were going to order "next month" was taken off the market in the meantime. It has more times than we care to recount.

Avoid the heartache and misery of missing out on good books. Send your order today.

And avoid embarrassing electrical burn marks on intimate parts of your body. Don't wet the bed wearing earphones!

**Lindsay Publications Inc**

PO Box 583, Manteno IL 60950

508

BULK RATE  
U.S. Postage  
PAID  
Elmhurst IL  
Permit No. 84

Address Correction Requested